THE STATE ROLE IN OUTER CONTINENTAL SHELF DEVELOPMENT: THE CALIFORNIA EXPERIENCE

HEARINGS

BEFORE THE

NATIONAL OCEAN POLICY STUDY SUBCOMMITTEE

OF THE

COMMITTEE ON COMMERCE

UNITED STATES SENATE

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ON

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THE STATE ROLE IN OUTER CONTINENTAL SHELF DEVELOPMENT: THE CALIFORNIA EXPERIENCE

FRIDAY, SEPTEMBER 27, 1974

U.S. SENATE,
COMMITTEE ON COMMERCE,
NATIONAL OCEAN POLICY STUDY SUBCOMMITTEE,
Santa Monica, Calif.

The subcommittee met at 9:50 a.m., in the Civic Center Conference Room, Santa Monica, Calif., Hon. John V. Tunney presiding.

OPENING STATEMENT BY SENATOR TUNNEY

Senator TUNNEY. Good morning, the committee will come to order. For the record, I am John Tunney and on my left is Senator Ted Stevens, of Alaska.

Senator Stevens, I would like to take this opportunity to welcome you to warm, sunny, southern California, and I am grateful to you for taking time out from your busy schedule to be here this morning. Through your cosponsorship of the Coastal Zone Management Act, your participation in the development of the deepwater port legislation, and your involvement in recent National Ocean Policy Study hearings in Washington on the coastal impacts of OCS development, you have gained considerable expertise concerning energy-related problems in the coastal zone. I am delighted to have the benefit of your experience as we talk about the California situation.

Senator Ernest F. Hollings, of South Carolina, who is chairman of the Senate National Ocean Policy Study, has asked me to express his regrets that he cannot be here today due to previous commitments in his home State. Senator Hollings was a principal cosponsor of the Coastal Zone Management Act and was instrumental in the creation of the National Ocean Policy Study. He has asked me to assure you of his very strong interest in the subject of these hearings, and has indicated that he expects the National Ocean Policy Study to move quickly to make recommendations and formulate legislation based upon what we learn here in Santa Monica. The National Ocean Policy Study should have its recommendations on this issue ready to go by the first day of the 94th Congress.

Today is the first of 2 days of hearings that the National Ocean Policy Study will conduct on the subject of the State role in offshore oil and gas development. In February of this year, the Senate of the United States felt compelled to reassess our entire national posture and policy relating to the oceans and particularly how the growing needs of our citizens would impact life in the coastal zone. Under the leadership

Staff member assigned to these hearings: John F. Hussey.

of Senator Magnuson and Senator Hollings, Senate Resolution 222 passed the Senate by a unanimous vote. It provided for much needed comprehensive reassessment of ocean policy, and it brought into this review other Senators representing the Public Works Committee, the Committee on Interior and Insular Affairs, Committee on Foreign Relations, the Appropriations Committee, the Government Operations Committee, the Committee on Labor and Public Welfare, and the Committee on Armed Services, each of whom have major concerns over some aspect of national ocean policy.

Since its creation the study group has been hard at work. The economic, social, and environmental impacts of Outer Continental Shelf development have been among the first areas of investigation by the study. The former administration's decision to lease 10 million acres over the next 6 years is a good example of how national ocean and coastal zone policy is often precipitated by major policy decisions in other areas—in this case energy policy. It can, I think, be properly described as ocean policymaking by default.

Outer Continental Shelf development off our coasts will have more of an impact on the ocean environment, the coastal economy, and growth and development in the coastal zone than any other single Federal action in the years to come. Yet the Federal Government has developed its leasing program in a vacuum, basing it almost entirely on an elusive quest for energy independence, while giving little consideration to the impact of such a program on other national goals and policies.

While this is the first hearing on the specific topic of State and local involvement in Federal decisionmaking, the National Ocean Policy Study held 6 days of hearings in Washington in April and May on the coastal impacts of OCS development, and an additional field hearing was held in Boston last month. In conjunction with these hearings, the Office of Technology Assessment and the Library of Congress have been assisting the staff in conducting studies and preparing reports on various aspects of OCS oil and gas development. The National Ocean Policy Study expects to make substantive recommendations next year in the form of legislation that will be aimed at solving some of the major conflicts in national policy with regard to offshore development.

The issue of the timing and location of the proposed oil and gas leases off the southern California coast has been in the forefront of the public mind since the Department of the Interior first announced its intention to begin leasing sometime next year. As most of you are aware, the city of Los Angeles and virtually every other local government onshore from the drilling area have passed resolutions expressing concern over the speed at which the Department of the Interior has moved to begin leasing. Many have asked for a postponement of leasing until proper assurances can be made that the California coastline would not be damaged.

The California Coastal Commission, which has been involved in preparing a coastal zone management program for the State, passed a resolution in August which requested that—

> The Secretary of the Interior . . . defer issuing any new leases for oil and gas development on the submerged lands adjacent to the State of California until the California Coastal Conservation Plan, or at least the applicable energy elements of the Plan, have been completed by the Regional and State Commissions or until the Federal Government's development plans for these lands

have been otherwise adequately reviewed by and approved by the Coastal Commission and other appropriate agencies of the State of California.

When Interior refused to postpone the proposed lease sale, in accordance with the Commission's request, the Attorney General and the Commission filed suit in U.S. Federal district court asking that Interior be enjoined from going through with the sale until an environmental impact statement can be completed on Interior's comprehensive 10 million acre leasing program. It is argued, quite rightly I believe, that other alternatives to drilling in the southern California area should be properly examined before, and not after, the decision to lease these areas is made.

The State legislature has also spoken clearly on this issue. A joint resolution passed by both houses on April 18, 1974, notes, among other things, that "the State of California has no control or voice in the decisionmaking process for the leasing of offshore waters under Federal jurisdiction, even though the State has a primray interest in the safety, pollution prevention, economics, and esthetics of such operations." The legislature went on to ask the Congress and the President—

* * * to support and adopt such laws and regulations as will permit the State of California to participate in all decision making relating to the leasing of federal submerged lands off the California coast for oil or gas production, including granting to California the right to recommend denial of any proposal which endangers the state's coastline or life or property in the state, constitutes an immediate or potential geologic hazard, or is environmentally incompatible on an aesthetics or total use basis * * *

The State legislature also went on record as favoring compensation for California consisting of a portion of the oil and gas revenues in order to assist the State in coping with secondary economic and environmental impacts.

As Senator from California, I have been particularly concerned with the OCS development problem and have sought ways to improve the role of the State and local governments in the Federal decisionmaking process. My own position is that the Federal offshore leasing program should proceed only if it is consistent with California Coastline Commission policy and plans and is conducted with strict technological, environmental, and esthetic safeguards. Federal consistency with coastal zone management plans is clearly stated as a policy of the Federal Government in the National Coastal Zone Management Act of 1972. It is high time for the Department of the Interior to give proper consideration to the goals and policies of this Act in their dealing with State and local governments in matters of such importance as offshore oil and gas development.

There is no question that tapping the Nation's offshore oil reserves can significantly ease the fuel shortage. There is no question that it has an important place in Project Independence. But in doing so, we must be sure that we are not harming the marine and coastal environment. We simply cannot risk another oil spill disaster like Santa Barbara. This is precisely the reason why coastal zone management and the careful consideration of the timing and location of the drilling sites are so important. This is why the State of California and other affected States must be given a definite, substantive voice in the decision as to where drilling should and should not occur.

A number of bills have been introduced during this Congress, including one 1 sponsored, to increase environmental protection and

safety of offshore drilling while acknowledging the need for greater offshore oil production. It has been my hope that major new drilling operations, such as in the virgin areas off southern California, would be delayed until Congress has an opportunity to enact necessary legislation.

Last week the Senate adopted a bill that would amend the Outer Continental Shelf Lands Act of 1953 to provide greater environmental safeguards. During deliberations on the Senate floor the National Ocean Policy Study was successful in adding amendments to this bill which clearly establish a stronger role for State governments in negotiating with the Secretary of the Interior over disputes arising from oil and gas development on the Outer Continental Shelf. The most significant amendment—which I cosponsored with Senator Cranston and Senator Mathias of Maryland—granted the Governors of coastal States the right to ask for a postponement of the lease sale in the event he finds that adverse environmental or economic damage would occur. In the event the Department of the Interior should fail to grant the requested postponement, the decision would be sent before the National Coastal Resources Appeals Board for arbitration. The decision of the appeals board, which would include the Vice President, the head of the National Oceanic and Atmospheric Administration, the Administrator of the Environmental Protection Agency, and the Secretary of the Interior, would be final. This goes a long way toward elevating the States' voice in determining where and when drilling should occur.

The Ocean Policy Study also was successful in adding an amendment emphasizing that the protection of the coastal zone and its resources are equally important goals to the Nation and must be considered as a factor in future development of offshore areas.

Another key Ocean Policy Study amendment, adopted by a 73–18 role call vote, transferred a proposed $200 million coastal States fund away from the Department of the Interior into the Department of Commerce, the agency responsible for administering the Coastal Zone Management Act. It was the feeling of a majority of the Senate that an Interior-administered fund would place the Secretary in a position of conflict. Since he has responsibility to develop the OCS, he should not be able to unfairly influence States opposed to development by being able to grant them large sums of Federal aid to lessen their legitimate concerns. The fund can be more fairly allocated by the Department of Commerce to the best interest of affected coastal States, such as California.

While this bill, entitled the Energy Supply Act, has little chance of getting through Congress this year, it is certain to be one of the first orders of business next January, when the new Congress convenes. Between now and then, Chairman Hollings and the National Ocean Policy Study are goig to examine the procedures currently being employed by Interior to solicit State and local participation in decisionmaking, through hearings such as these, with the idea of establishing a definite, effective voice for the coastal States in these important matters. The amendments adopted last week are only the first step in this effort. Testimony we are about to receive at these hearings will be valuable in helping formulate this new State role.

Today and tomorrow we are going to air three questions of interest to the study group: First, we want to know what the State role is, and what it should be, regarding development of offshore oil and gas resources. Secondly, we want to know what role coastal zone management should play in the timing and siting of drilling sites and onshore support facilities. And, finally, we want to examine the leasing program now being followed by the Interior Department, and the national energy policy being developed by the Federal Energy Administration to ascertain the reason why the Federal Government has chosen this particular time for developing the southern California leasing area. I understand that there has been some conflicting statements between Interior and FEA over the degree of flexibility that can be afforded with regard to postponing the lease sale. I think this should be cleared up so that we will know what the current policy of the Federal Government in this matter actually is.

Senator Stevens?

Senator STEVENS. I am happy to be here with you, Senator Tunney. Alaskans are quite interested in the subject, and would like to point out that 65 percent of the Outer Continental Shelf is off Alaska and half the coastline of the United States is Alaskan. We are vitally interested in cooperation between State, local, and Federal agencies and I will be interested in hearing the testimony here today.

Senator TUNNEY. Our first witnesses are going to appear as a panel: Hon. Roy Holm, mayor, city of Laguna Beach; Pieter Van Den Steenhoven, councilman, city of Santa Monica; Pat Russell, councilwoman, city of Los Angeles; Lois Seidenberg, representative of the city of Santa Barbara; Milan Dostel, mayor pro tem, Newport Beach.

Could you step forward to the witness table?

STATEMENTS OF ROY HOLM, MAYOR, CITY OF LAGUNA BEACH; PIETER VAN DEN STEENHOVEN, COUNCILMAN, CITY OF SANTA MONICA; PAT RUSSELL, COUNCILWOMAN, CITY OF LOS ANGELES; LOIS SEIDENBERG, REPRESENTATIVE, CITY OF SANTA BARBARA; AND MILAN DOSTEL, MAYOR PRO TEM, NEWPORT BEACH

Mr. HOLM. Thank you, Mr. Tunney. We are very appreciative that this committee, which played such a fundamental role in the enactment of the Federal Coastal Management Act, is holding these hearings in southern California. We are most anxious that our Outer Continental Shelf be viewed as something other than a repository of oil and gas. It is a unique place on this planet and we believe its use and destiny should be determined by people who have the latitude to consider a variety of options and alternatives.

We have been asked to focus our remarks on (1) the State's role in Federal decisionmaking, and, (2) the timing of the proposed leases, and I shall do so.

First, the question of State participation in these decisions which will ultimately be decided at the Federal level, either by the administration, by legislation, or in the courts. The impact on the State by a decision made at the Federal level can be understood by examining

a statement in a Western Oil and Gas Association information release dated June 5, 1974.

> Prospects of finding significant accumulations of oil and gas off shore California are considered attractive, and if discoveries are made, a great advantage is their proximity to the consumer.

Now, since we do not burn crude oil in our automobiles, I presume proximity to the consumer means proximity to refineries. Here is where this possible Federal decision to open a major oil field in this highly urbanized area meets headon with land use and zoning prerogatives which are in the province of local governments.

State and local agencies have been advised as long as 25 years ago that our smog conditions made it unwise to build additional refining and power-generating facilities in the Greater Los Angeles Basin. Our existing refinery capabilities, we are told, are not now able to handle a more imminent supply of crude oil expected to come from Alaska's North Slope.

Evidently, additional refinery capability is planned for the Los Angeles area. For those who might be tempted to welcome this, that is, large refinery construction companies, some major unions and others who might view this as a great economic infusion, let me speak a few words of caution.

From Ventura to Dana Point, and including all the islands in this large coastal area, we have one of the great tourist industries of the world. This is an aquatic-oriented industry, with hotels, motels, restaurants, sailing, sport fishing, powerboating, and other recreational amenities.

It supports directly and indirectly a large segment of our population. The tourist industry is a service industry and is highly labor intensive. A review of annual reports of companies in this industry would show, typically, one employee for every $15,000 to $20,000 in sales.

Contrast this with oil production and refining companies, which are heavily capital intensive, employing only one person for approximately every $250,000 in sales. A massive program of placing drilling platforms in this marine playground and the accompanying proliferation of refinery and transport facilities on the shore is clearly a threat to recreational uses of this area.

To jeopardize the jobs of hundreds of thousands employed in the recreation industry in order to create few, new jobs in the oil industry, relatively speaking, would have great economic and social consequences.

Such large-scale offshore drilling operations and their required onshore support facilities would insure significant preemption of local, as well as State, land-use authority. This threat would not be limited to the immediate coastal area but would involve location of large inland transshipment terminals and facilities.

Federal and oil industry spokesmen have said that, if State and local governments block development of these onshore support facilities, production and transportation could be achieved through establishment of deepwater facilities for loading, entirely within the Federal jurisdiction, but that this process would entail greater risks of oil spills and other mishaps.

It will be essential to determine the relative risks involved in all oil operations, not only with today's technological state-of-the-art, but

in terms of projected technological capability. Further, the risk to the southern California area of either system may be determined to be unacceptable, so that a simplistic, either-or portrayal at this time would be specious.

In November 1972, the people of California enacted the California Coastal Zone Conservation Act through the initiative process and by a considerable majority. This represented a statewide mandate to provide long-term planning of a resource now widely recognized as both irreplaceable and dwindling.

Completion of the California coastal zone conservation plan is now scheduled for December 31, 1975. It will then be submitted to the State legislature for adoption.

The inherently large scope and impact of offshore oil drilling activities would very probably preempt areas of concern in the plan. The award of leases prior to completion and adoption of the plan is premature, to understate our position, and is the reason the California Coastal Zone Conservation Commission has joined with the California Attorney General in bringing suit against the Department of Interior.

I am certain that this committee will find that the concerns and views I am expressing are not limited to the coastal communities in southern California. The Orange County and Los Angeles County Division of the League of California Cities voted 23 to 1 in support of a resolution expressing strong opposition to the proposed leases.

Eighteen of these are inland cities with no coastline or view of the coastline. The Orange County Board of Supervisors unanimously adopted a similar resolution. You will learn later in these hearings of the hundreds of thousands of people who signed, in one weekend, a petition asking that this program not proceed.

The significant thing to me is that the great majority of these petitioners did not live along the coast. In Laguna Beach, for example, 11 percent of the 22,000 petitioners were Laguanans, with the remainder from all over the State and the Nation.

The Seashore Environmental Alliance hopes the wishes of these people will be taken into consideration in the Federal decisionmaking process when these petitions are delivered to President Ford.

The second point of consideration is the matter of the timing of the proposed sale of these leases. It is our contention that an adequate study cannot be made on a program of this magnitude in the time allotted. The draft environmental impact statement is due in October of this year and calls for all public hearings to be completed within 90 days. Of one thing we are convinced. The environmental impact statement will be big. But analysis, review, and response by public agencies and interested parties just can't be appropriately done in this period. And only 30 days are provided for response to the final environmental impact statement.

We have been admonished by the Federal Energy Administration to accept this as our contribution to Project Independence. Project Independence calls for national energy self-sufficiency by 1980. According to an information release from the Western Oil & Gas Association dated July 24, 1974, the rate of production is not expected to get into high gear until 1987, and of the estimated recoverable oil by the year 2010, 35 years from now, an amount would have been recovered equivalent to that which would provide energy to the United States for approximately 7 months.

Senator TUNNEY. Excuse me for a second. Please keep the signs down during the course of the hearing. If you want to go outside the hearing room, I don't mind at all what kind of signs you hold up. It is a free society.

But in the hearing room while we are conducting hearings, it is not allowed under the Senate rules to have signs.

A VOICE FROM AUDIENCE. We object to that strongly. We should have alternative fuels such as hydrogen and solar power. We need it now. You have said you wanted to go to UCLA. When will you pay attention to the people. You wouldn't have offshore drilling hearings at all if you would turn to alternative fuels. Why aren't you doing it?

Senator TUNNEY. The Senate rules provide that no expressions during the course of a hearing can be held from the audience unless the hearing has adjourned for the day. Inasmuch as we are conducting a hearing now with witnesses testifying, I am going to ask you to adhere to the Senate rules. You will have an opportunity to make a statement at the end of the day today or tomorrow, expressing your opinion fully. At the present time, I would ask you to make life simpler for me and you by adhering to the Senate rules.

Senator STEVENS. I join him in that. The Senate rules are clear, and we are authorized to hold these hearings according to the Senate rules. In addition, it is a matter of simple courtesy. Your cooperation will enable others in the audience to see the witnesses and hear their testimony.

We are willing to hear you at the proper time. These witnesses are appearing in the order established. We plead for your cooperation.

VOICE. We have children who cannot exercise because of the dirty smog. It is courteous to think of them and get clean air fuel. I have been trying to get Senator Tunney to UCLA for 2 years, to get Senator Tunney to support the hydrogen project.

Senator TUNNEY. You will have a chance to testify at the end of the day.

VOICE. We have children breathing smog and birds dying in Santa Barbara. I will push alternative fuels until you get it through your head.

Senator TUNNEY. Thank you for being courteous and sitting down. Please proceed.

Mr. HOLM. As I was attempting to indicate in my prior remarks, I think clearly the southern California Outer Continental Shelf cannot be considered a factor in Project Independence.

It seems doubtful that, if sold, the leases would get early attention from the industry. The reaction of the oil industry to inquiry from the Department of Interior indicates the southern California Outer Continental Shelf ranks fourth among major U.S. Outer Continental Shelves. The reasons, as reported in the Los Angeles Times, August 13, 1974, relate to the seismicity of the area and the lack of present deep water technology.

Why, then, sell for 1975 dollars, leases which are to be exploited in the indefinite future? From the industry viewpoint, the environmental impact and other pertinent issues will have been dealt with and would not have to be reconsidered some years in the future when technology catches up with seismic and deepwater problems.

From the Federal Government's viewpoint, the sale would represent a significant one-time infusion of dollars to the 1975 budget. But our

children and grandchildren will be paying 21st century dollars for the product.

I share the concerns expressed by the industry relating to the present state of technology. The submerged lands in question as well as the State submerged and tidelands adjacent, are quite literally laced with earthquake faults.

This is of particular importance and should be carefully studied in the environmental impact statement. It is general knowledge that the Santa Barbara channel blow-out of January 1969 was through an earthquake fault, rather than through the core which had been drilled through the ocean floor.

The core was capped, but the crude oil under pressure found its way through a network of earthquake faults. There is no failsafe way of breaking through the ocean floor in an earthquake fault area. This fact was recognized by the California legislature in 1970 when they amended the public resource code to prohibit exploration in State offshore oil sanctuaries, except by seismic and other methods which would not break the crust of the ocean floor.

And oil spill containment technology does not hold out much hope. "Exploring Energy Choices, A Preliminary Report," by the Energy Policy Project of the Ford Foundation, 1947, states:

> It is virtually impossible at present to contain and remove spilled oil when waves higher than 3 feet and/or currents of more than 1 knot are present. Chemical dispersants may have harmful side effects that are worse than the oil itself.

In evaluating the petroleum potential of all our continental shelves for the Committee on Resources and Man, geologist Preston Cloud reported:

> Even the largest quantites likely to be found, including petroleum that may be forming, will not greatly prolong the exhaustion of estimated reserves at current rates of consumption.

And the ultimate answer lies not in getting our oil elsewhere, for we are running out of elsewheres. I believe that education, strong emphasis, and leadership from Washington in the conservation of energy can buy us the necessary time to develop alternatives to fossil fuels. We all know we can ill afford to burn up, at increasing rates, this resource which is a critical raw material for chemical, petrochemical, and fertilizer production in future years.

Thank you for coming to southern California to discuss this vital matter.

Senator TUNNEY. Thank you, Mayor Holm. That alarm that went off indicated that 10 minutes had expired on your testimony and we took some of your time so that is why I didn't interrupt you.

I am going to ask the other witnesses, because of the number of witnesses we have to hear today, to contain their initial remarks within the 10-minute time limit. This alarm will go off when 10 minutes is concluded and we will put your statement in the record. That will give us time to question you.

Please proceed.

Mr. VAN DEN STEENHOVEN. We are pleased you have chosen to come to Santa Monica to hear us out on the local issue of Federal haste and waste in regard to the offshore petroleum leases as well as the larger issues of the overall care and maintenance of the world's oceans, national and worldwide demand for petroleum, et cetera.

With regard to the present spector of offshore drilling, I want to make one point and I will make it several ways, that point being that the present timetable for offshore lease sales next May wholly and completely violates presently enforceable Federal guidelines, procedures, and laws. What is the present timetable?

As you can see, from now through October 1974, the environmental impact statement is under study, with the draft release scheduled for late October 1974. According to the Western Oil and Gas Association, this involves 350 persons. From November 1974 through January 1975, public comment is being solicited on the draft EIS, with the final to be submitted in March 1975. For 30 days after the final submission, there will be a 30-day post-release period. Then, late in April, the Secretary of Interior is legally permitted to reach a decision about the lease, after evaluating the final environmental impact statement and public review and comment.

Conversations with the Los Angeles office of the BLM have revealed that this hasty schedule is already beginning to slip internally due to the mammoth task involved, with the entire schedule being moved back at least 30 days.

There will be further slippage internally. Many of us observing these slippages from a close perspective feel strongly that they are being caused simply because the BLM and the Department of the Interior were not aware of the monumental size of the research and development task at hand.

They are just beginning to realize that adherence to the present timetable would require wholesale violation and/or ignorance of the necessary steps required by the Federal National Environmental and Protective Quality Acts, not to mention a host of presently adopted State guidelines.

The second way I want to make this point of Federal haste and waste is with regard to Outer Continental Shelf leasing, in particular, as a part of the presently underway Project Independence.

As I am sure you are aware, Mr. Sawhill and company have been holding hearings around the country with regard to various aspects of Project Independence since early August of this year, the first hearing having been held in Denver.

Perhaps ironically, this week's hearings were held in land-locked Atlanta. Perhaps less ironic was the subject under discussion in Atlanta, none other than Outer Continental Shelf leasing. How convenient for Mr. Sawhill to hold hearings regarding offshore drilling in a landlocked city 200 miles from the nearest salt water and 2,000 miles from Los Angeles, where he knows that the heat on the Outer Continental Shelf question is being turned up.

Similarly crafty, no hearings at all are being held in the Northern Great Plains, Appalachians, Louisiana, or any in southern California, by the Project Independence Committee, all charted for extensive energy resource development.

But location of these hearings, which are supposed to comprise a substantial part of Project Independence, is a mere humorous symptom of the fundamental, the basic sham of this Project Independence.

To reveal this basic sham, we need simply to look at the timetable again. The final Project Independence Blueprint Report is to be delivered to the President September 30, just 3 days from now.

This is in the face of the fact that hearings are still going on even this coming weekend and won't be complete until October 10 in San Francisco. It is sad, but blatantly obvious, that this Project Independence Blueprint will not bear even the slightest tokenism to a supposedly significant part, contributions from the public hearings.

To quote from this month's National League of Cities report:

> Perhaps the most disturbing aspect of this entire Federal venture—meaning Project Independence—is the fact that local elected officials, the chief managers of the Nation's urban environments where virtually all of the social, economic, and environmental consequences of expanded energy source development will become manifest, have been effectively excluded from meaningful participation in the development of this plan. The apparent closed nature of the development of the Blueprint and the difficulty of obtaining information on the substance of Project Independence could well jeopardize the broad-based support that legislation of this magnitude will require in Congress and with public officials throughout the Nation.

Gentlemen, Mr. Sawhill is not fooling anyone but himself if he truly believes this brand of central control with no opportunity for rebuttal will be ignored in today's political climate.

To summarize, the scheme of the Federal Government to lease offshore areas of southern California for petroleum and natural gas extraction reveals itself to be a haste and waste scheme violating guidelines, laws, and oven our republican principles of government for both the southern California leasing and on a large scale, the Blueprint Report for Project Independence.

Ladies and gentlemen, so far we have covered only the specific tactics of attack on a local problem. Let's shift our attention for a moment to a more strategic perspective through looking at the demand at large for petroleum created through the pricing mechanism.

I believe in the efficiency and equity of the pricing mechanism, if there is a genius to a free capitalistic system, this is it: That those who are willing to pay the price for a good or commodity have instant knowledge of what they are going to have to forego with their limited resources, and I stress the word limited for what follows in a few moments, in order to get the good or commodity they want. They can know exactly how many cans of soup a jar of jam is worth, or how many cars a house is worth, or in this case, how many bus rides a gallon of gas is worth.

With respect to fossil fuels, the effectiveness of the pricing mechanism has shown its efficiency to a much greater degree than even the most optimistic forecasters have predicted. With the price of gasoline having climbed over 40 percent in the last year, we have seen annual consumption through this summer flatten out and even drop a solid 6 percent, and this even with more cars and greater gas guzzling per car on the road. Even this week, the Royal Dutch Petroleum Consortium reported an annual drop of 12 percent in their sales.

Our former President said, "The days of cheap energy are over." Gentleman, I submit to you they were never here; we just weren't facing reality. Taking oil for instance, our tax structure has been such that 22 percent of gross income has been deductible from taxable income for oil and gas producers. This saving from taxable income had a great incentive effect. It made production of oil and natural gas cheap. It was an incentive to produce more oil/gas and indeed, this saving was passed on, at least in part, to us the ultimate consumer.

I was pleased to read that Mr. Mill's House Ways and Means Committee voted last week to reduce this 22 percent deduction to 15 percent this year, 8 percent next year and eliminate it completely in 1976.

Gentleman, I urge you, too, to pass this measure ending the oil depletion deduction, for up until now, the reason we have had cheap energy is because its production has been subsidized through this resource depletion tax gimmick and energy production has also been the beneficiary of other false economies. Oil and gas producers, along with almost all industry, have not had to pay for cleanup of the polluted water, earth and air they spawn during extraction, production, or transportation. The pollution has merely been pumped down current, downstream, downwind, or overboard.

Gentlemen, we all now realize that this has been true shortsightedness, that if any of us are to survive to enjoy life, we must pay all the costs of production for things we consider progress, including the indirect cleanup or social costs so that all of us, including the pelicans, seals, and scavenging seabirds, may survive to enjoy life.

To summarize the last few moments, we have had apparently cheap energy to date because of the subsidy of production allowed through the resource depletion reduction, and by not paying the indirect cleanup costs of energy production. Now that we are on the road to paying the true and full costs of production through ending the depletion deduction and enforcement of the National Environmental and Protective Quality Acts, we are going to continue to see substantial—even dramatic—rises in the cost of energy. And this is as it should be for we will be paying the true and full costs of production and consumption. And the effect?

We've already had a glimpse. With the price of gasoline going to 70 and 80 cents a gallon—and Ford Motor Company's chief enonomist last week predicted it would hit 83 cent a gallon in today's values by 1980—we're going to see the magic of the pricing mechanism in action. We're going to see people doing more walking, more bike riding, more riding the bus and maybe, just plain more staying home. The net effect of this is that the overall demand for gasoline and other petroleum produced products is going to be inhibited to a great degree and we're going to reach Energy Independence even before 1980. We won't even need the oil offshore of southern California if we (1) eliminate the depletion deduction as Chairman Mills' House Ways and Means Committee voted to do last week, and (2) start enforcing the National Environmental and Protective Quality laws so that we all—producers and consumers—pay the true and full cost of energy production and consumption.

At the risk of getting off the subject, I want to close with a few remarks about a related matter, something we politicians (whether it is a councilman or a U.S. Senator) all speak loudly about in private, but very quietly about in public: namely, taxes.

Gentlemen, you are our representatives—whether we look to you as from the California constituency or from the national constituency. We look to you for leadership and guidance. Gentlemen, we want you to stop hedging against inflation with promises of deferred spending and cuts in spending in the budget whose first day of spending is still more than 9 months away.

Gentlemen, we want you to end inflation and we want you to stop it in its tracks. We want you to raise income taxes progressively for

those who can afford to pay—those with higher incomes. We all know that inflation strikes hardest at the small and the poor—these are not the ones to hit. Hit the bigger and richer, both individually and corporate or proportionately with their ability to pay. Not only will this stop inflation tomorrow, it will have the side effect of balancing that big budget of all of us and perhaps even lead us to a surplus, which brings me to my truly final point.

Gentlemen, instead of having as a hard-and-fast goal, independence from energy want, wouldn't it be a far better goal for our Nation as we embark upon our third century, to launch a national campaign to free ourselves from the most basic liability and want of all—the national debt, our $1,500 for every man, woman, and child alive today? Wouldn't it restore our confidence in ourselves if we, the most wealthy Nation on Earth who have demonstrated our technology in putting man on the Moon, can also demonstrate our wisdom for ourselves, not to mention our friends and adversaries throughout the world, by burning the mortgage papers taken out in the 1930's? Wouldn't it be a much truer expression of independence to ourselves, our friends, and our competitors for allegiance of the human spirit to demonstrate our true independence from want by ending this confidence game? This confidence game may not take us down this time, but is setting us up for an even bigger fall next time when there is some slack in the system. If we can get together enough to set our house in order with this—ending the public debt—as our national goal, I'm sure our energy problems will be solved in the process. We thank you again for giving of your time and for coming to Santa Monica.

Senator TUNNEY. Our next witness is Pat Russell, councilwoman from Los Angeles.

Mrs. SEIDENBERG. May I interrupt, Senator Tunney. I am giving two brief resolutions which will take only 2 minutes. I am wondering if I can't turn over some of my time to the other statements here, so they could finish.

Senator TUNNEY. You certainly can. You will be next and if you want to yield part of your 10 minutes to anyone, you may.

Mrs. RUSSELL. Thank you, Mr. Tunney and Mr. Stevens for coming to southern California and having a meeting on this important issue with us this morning.

I am here as Councilwoman to the Sixth District and I represent an area with more coastline than any other person of Los Angeles, running from Santa Monica to El Segundo. I represent people with obvious stakes in the offshore leasing. I represent the Los Angeles City Council, which unanimously passed a resolution which calls on the Federal Government to delay the leasing until the coastal commission has completed its plan for the coastal area.

I am proud to represent a whole collection of southern California cities who have developed a recent statement, again opposing the granting of leases until after the plans have been completed for the coastal area.

Finally, I represent Mayor Tom Bradley this morning, who deeply regrets he could not be here himself to address you. As president of the National League of Cities, he has gone to Chicago today to preside over an extraordinary session they are holding today.

Because I have worked at all of these levels and also have worked with the mayor, I will present his statement which I would be glad to present as my own.

There can be no question that we as a Nation must rapidly reduce our dependence on foreign energy resources and in the short term, this will entail increased extraction of domestic fossil fuel deposits.

At one time, last December, we found ourselves facing an apparent deficit in the ability to supply electrical power of more than one-third the anticipated annual demand. This was a result of our dependence on Middle East resources for half of the oil we thought we would need to meet the demand.

Today, the remarkable conservation efforts of our citizens, business, and industry have eased the crisis. We reached the point of 17-percent reduction in energy use in the city through voluntary methods. We still must establish reasonably assured supplies in the long term. An essential factor in achieving the assurance is that future needs are supplied by domestic sources.

Especially in the charged atmosphere of compelled necessity, we should take care to avoid the irreparable damage and loss of limited resources which would result from a hasty reaction.

As you know, the industry at the invitation of the Secretary of the Interior, is selecting areas for leasing scheduled to occur in the spring of next year. These preparations are proceeding under the same law modified only by administrative regulations as that which permitted the tragedy of the Santa Barbara oil spill of 1969.

We may be moving ahead today with greater haste. I think more alarming is the greatly increased geographic scale of the administration-proposed leasing program. Here in southern California, the oil industry was taken by surprise at the Secretary's original invitation for nomination within the 7.7 million acre area off Los Angeles. This has subsequently been reduced to a primary area of 1.6 million acres, most of which are adjacent to the coastal area.

To move so rapidly to exploit so great an area with little concrete information concerning consequent environmental impacts, drilling technology in relation to the local circumstances, oil spill containment and cleanup capability, the relative priorities for the several national OCS areas, the alternative sources of energy, the Federal and State coastal management plans, it would be to play fast and loose with a natural resource of immense demonstrated value to all the people of this Nation.

For instance, it is regrettable that the vital work of your National Ocean Policy Study to articulate Federal policy concerning appropriate use of the ocean and of mineral and energy resources beneath the ocean floor will not have been completed prior to such a sweeping and irreversible commitment.

It is further regrettable that the national policy framework cannot be adequately formed and considered within the time schedule for leasing laid by the Department of the Interior.

Finally, at the Federal level, it would be a grave error to proceed with the commitments under a law conceived and enacted during a period of national ignorance to the implementation of limited resource supplies and period of headlong postwar expansion and development.

I urge you in the Congress to take strong action to assure further extraction from the Outer Continental Shelf will be subject to carefully considered constraints to be incorporated as an amendment to

the Outer Continental Shelf Lands Act of 1953 before the Congress and to be reintroduced in the coming session.

Such amendment must be developed with utmost concern for environmental hazards and resource recovery. We must establish national priorities for exploitation based on weighing of relative hazards, as well as hazards within each area.

Although offshore oil recovery may be more environmentally acceptable than onshore shale mines, for instance, this should not lessen the resolve to give the project close scrutiny. Technical information is incomplete. Oilspill containment and cleanup capabilities are subject to controversy as to their adequacy.

Information must be supplied before any contractual commitment is made. Government credibility and management resources are emerging as a major issue.

Some of the legislative amendments proposed contain congressional guidelines and criteria which will constrain the procedures of the Secretary of Interior in the administration of the program. Events of years passed since the enactment of the 1953 law seem to indicate the need for more accountability, even if it means less administrative efficiency.

It is clearly the responsibility of the Congress to balance the executive authority. Here at the State level, we need to point out the concerns of Californians for the future of the California coastline. The passage of the California Coastal Zone Act indicates the will of our people to assure continuation of the extraordinary benefits of the great resources to present and future generations.

Recreational use includes not only beaches and coastal lands, the environment, but pleasure boating and commercial marine operations of every description.

A matter of particular concern is the future of the channel islands of the Outer Continental Shelf. The potential of these islands as a resource to the burgeoning recreational needs remains largely untapped.

They are, of course, under the jurisdiction of the coastal commission but are far enough at sea to be separated by a strip of ocean under Federal jurisdiction.

The channel islands are a part of life in southern California, though they are in danger of being isolated by a river of development operations between them and the mainland.

To anticipate such emerging factors as this, to weigh alternative development and conservation proposals and to laydown policies which would guarantee all Americans and their descendants the full benefit and experience of the remarkable resources, the coastal zone management commission plans to develop a plan to be submitted to the legislature in 1976. Preparation of the plan is proceeding. The development of offshore oil deposits would be likely to impact on the planning jurisdiction and will be included in the commission recommendation.

Mr. Chairman, I would like to give you our recommendations which are two: I urge you, the U.S. Congress, to suspend any Federal action to grant new leases in this area pending completion and adoption of the California coastal zone conservation plan and, second, to increase Federal funding assistance to the commission under the Federal Coastal Zone Management Act of 1972.

Thank you very much.

Senator TUNNEY. Thank you. We appreciate your being here. As always, you make a very effective witness. Mrs. Seidenberg, you will be representing the mayor of the city of Santa Barbara?

Mrs. SEIDENBERG. Right.

Senator TUNNEY. Please proceed.

Mrs. SEIDENBERG. David Shiffman could not be here today. He had a prior commitment and had to be at a meeting. He asked me to present two resolutions which were passed recently by the city of Santa Barbara. I will read them.

The following resolutions are the statements authorized to be read into the record by the city council of the city of Santa Barbara at its meeting of Tuesday, September 24, 1974:

RESOLUTION NO. 7038

A resolution of the Council of the City of Santa Barbara, California, supporting the Seashore Environmental Alliance petition in opposition to offshore oil drilling.

Whereas the Seashore Environmental Alliance is a recently formed coalition dedicated to the preservation of the California coastline; and,

Whereas the Seashore Environmental Alliance is sponsoring the circulation of a petition declaring opposition to proposed offshore oil drilling along the Southern California coast except in the event of a national emergency declared by Congress; and,

Whereas, the City of Santa Barbara sustained serious damages as a result of oil spilled from an offshore oil drilling platform in 1969;

Now, therefore, be it resolved by the Council of the City of Santa Barbara:

That the City Council hereby declared its support of the petition circulated by the Seashore Environmental Alliance declaring opposition to the offshore oil drilling proposal along the Southern California coast, except in the event of a national emergency declared by Congress.

That was adopted August 27, 1974.

RESOLUTION NO. 7039

A resolution of the Council of the City of Santa Barbara, California, opposing offshore oil drilling.

Whereas the California coastline is an important and irreplaceable natural resource of great aesthetic beauty and recreational value; and,

Whereas the recent decision of the United States Department of the Interior approving renewed oil drilling in the Santa Barbara Channel was made without adequate consideration of the restriction mandated by the California Coastal Zone Conservation Act; and,

Whereas the comprehensive plan for the land use of the California Coastal Zone as provided by the California Coastal Conservation Zone Act has not yet been completed and adopted; and,

Whereas the City of Santa Barbara sustained severe damages as a result of oil spilled from an offshore oil drilling platform in 1969; and,

Whereas the federal government has not promulgated adequate regulations for the conduct of offshore oil drilling operations to ensure that another oil spill disaster will not recur; and,

Whereas the proposed offshore oil drilling will endanger the beaches and other recreational areas of the California coastline;

Now, therefore, be it resolved by the Council of the City of Santa Barbara:

That the City of Santa Barbara opposed the approval by the federal government of any new offshore oil drilling leases and the renewal or commencement of oil drilling on any previously approved leases.

That was adopted August 27, 1974.

The city of Santa Barbara has adopted an ordinance which prevents any oil development whatsoever in the city limits of Santa Barbara. I am not going to answer questions today, because I have not been

authorized to do so by the city, however, I am a member of the panel tomorrow and will have a statement and I hope at that time, there will be questions I can answer.

Senator TUNNEY. Thank you very much. Our next witness is Milan Dostel, who is mayor pro tem of Newport Beach.

Mr. DOSTEL. I am mayor pro tem of Newport Beach, Calif. It is indeed my pleasure to appear today to present our views on the Federal Government proposal to permit drilling for oil off the shore of southern California. My colleagues from the other coastal cities have already expressed their concerns, citing serious problems connected with such an undertaking.

We are in full agreement with their remarks in opposition to offshore oil development and while I do not intend to reiterate the points already made, I would like to point out we have always believed that decisions which affect the lives of those who live within our boundaries should be made only after participation by those who are or will be affected.

We, in the city of Newport Beach, are concerned that this decision made by the Federal Government was made without benefit of public input from those who would be affected the most. The residents of those communities in southern California view the Outer Continental Shelf not as a virgin pool of oil to be exploited but as a national recreational area which should be preserved for the use and benefit, not only of this generation, but of future generations as well.

We are concerned that this decision was made by the Federal Government and is another instance of short-range, temporary solutions to a permanent long-range problem.

Too often, I am afraid we are prone to accepting solutions which are expedient rather than demanding solutions to our problem which do not, in turn, create other problems of a much more serious nature.

One example that quickly comes to mind is the freeway system in southern California. As it was being planned, developed, and constructed, it was hailed by many as the ultimate solution to the transportation problem but today we can see that not only it was not the ultimate solution but it created many more problems than it had solved.

Had we not relied so heavily on the freeways, had we had the foresight to study what side effects the creation of such a system might generate, we might have devised a system which would not have had such a devastating effect on our environment and our health.

I believe we are now at a point in time when we are faced with the same kind of decision regarding our energy problems. Shall we continue to deplete this natural, irreplaceable resource because it is expedient or should we preserve it for a time when the crisis occurs where we or future generations may find it to be of a more critical nature than it is today?

I believe the answer is clear. We must commit ourselves now to the development of alternate sources of energy and that commitment must be on a national level with the highest of priorities. We must free ourselves from our reliance on a source of energy which is transitory in nature and is, to a large extent, subject to manipulation by outside interests.

If we as a nation make this commitment, it is inconceivable to me that our scientific and technical community cannot solve the problem in a

relatively short period of time. We put a man on the Moon in a brief span of our history, once our Federal Government recognized the priority and made the necessary commitment.

American scientists have always taken great pride in their ability to accomplish those things which seemed impossible. With the backing of the Federal Government and the people, I am sure they can once again rise to the challenge which now faces them.

Exploring solar, nuclear, geothermal, conversion of solid waste and other sources of energy, and adopting them for use in place of petroleum products should be the Nation's No. 1 priority.

A few moments ago, I made reference to the view taken by most Californians regarding the Outer Continental Shelf being a recreational area to be preserved for the use and benefit of future generations. I should expand that not to include just Californians but the thousands and thousands of people from other States and countries who come to California each year to use and enjoy this area.

It is a most highly used recreational area and it is my belief it should be designated as a national preserve or national park. Recreational areas, are, after all, a vital part of our environmental and should not be destroyed or tampered with. Just as we would not consider defacing the Grand Canyon or Yosemite National Park, we should not consider defacing this important recreational area.

In Newport Beach alone, over 9,000 boats are berthed in the harbor and the beach attracts between 50,000 and 200,000 people per day. The possibility of desecration of this one area is quite high, if current plans for offshore oil drilling are carried out.

There can be no absolute guarantee that oilspills or blowouts will not occur or the area will not be lost forever. I ask the committee to make every effort to reverse the discussions of the Department of the Interior and pledge its support to the investigation of alternate sources of energy on a high priority basis.

Thank you very much.

Senator TUNNEY. Mrs. Russell, and any other member of the panel that would like to respond, do you believe that the announced intentions of the Department of the Interior to increase oil and gas development will seriously compromise local planning efforts?

Mrs. RUSSELL. I have no doubt it will. I think not only the concerns that has been expressed about the possibility of contamination through oilspills and the esthetic considerations, but look at the land use planning. I think there is no question that—I think it was our first speaker who said we don't burn crude oil directly. We have to have refineries and the amount they are talking about indicates refineries in rather massive numbers.

As I have heard the industry proposals, they are talking about massive installations on the very coastline we are trying to preserve and where we are trying to guarantee adequate housing.

Senator TUNNEY. Is that the general consensus?

Mr. HOLM. It certainly is mine.

Senator TUNNEY. Fine. Just one last question. One of our witnesses, Mr. Duke Ligon, has to catch a 12:15 plane back to Washington. He is involved in the Economic Summit Conference and he must be there and we want to give him an opportunity to testify before he has to leave for the plane.

I was wondering if you can tell us, will construction of onshore facilities for refining and storage significantly impact the transportation and control plans under development by the communities in southern California?

Mrs. RUSSELL. We are really doing our best in Los Angeles to survive with the controls as they are now. The city of Los Angeles has taken the posture that we can work with the Federal Government on it. I think they are working with us. We will have to stretch to be able to met them with what we have now. Our coastal area is badly congested in terms of transportation.

To add something of this massiveness means whether we will have people or industrial oil resources on the coast. I think there is one answer to the alternatives. I think it is a genuine alternative.

Senator TUNNEY. It is true, is it not, that there will be tremendous difficulty meeting the air quality standards and it will require a degree of flexibility on the part of the Environmental Protection Agency and perhaps, even some modifications of the law by Congress, in order to be able to move into a period where we can meet those air quality standards which all of us feel are important?

Mrs. RUSSELL. I could not say now that I believe we should change the law in Congress. I think the State standard we have now, the degree of smog in the last few weeks, emphasizes the importance of doing something in southern California. I am chairman of the planning committee and we spend a great deal of time trying to work out transportation and parking requirements in relation to land use planning so we can meet the EPA requirements.

We have had to make the choice whether to go for changing the laws and our mayor has made a statement that I support that we are not ready to support changes in the law yet.

The EPA has been to this point flexible in their discussions with the city, but we face a marked reduction in automobile use. Our people find this is vital in view of transportation and smog in response to the EPA requirements.

Senator TUNNEY. In Thursday's LA Times, September 26, there is a report on Mayor Bradley's position. It states he had made a personal commitment to Senator Muskie that the city would show good faith in efforts to achieve clean air in return for his deadline in the law to be amended. I don't want to fight as to whether we should amend the law in this particular forum but only to suggest if we have the oil and gas development of the kind being proposed, it will have adverse impact on southern California's ability to meet the air quality standards.

Mrs. RUSSELL. We will barely meet them as it is, if we can do that. This kind of development would make it absolutely impossible and would obviously countermand the legislation for clean air.

Senator TUNNEY. Senator Stevens?

Senator STEVENS. I would like to ask the panel one question. Statements I have heard today indicate you believe the decision has been made. I am one of the original sponsors of the National Environmental Policy Act. I think the decision was to start the process which could ultimately lead to leasing. The Environmental Protection Act, through the environmental impact statement, gives interested persons the opportunity to be heard, to review the statement, and certainly an

opportunity to enjoin the proposed action if you didn't like the decision.

What do you seek beyond that course of action? Do you want a decision that there shall be no oil and gas leasing at all?

Mrs. RUSSELL. Mr. Stevens, there are a variety of ways to answer that. The concern we have expressed from Los Angeles is that the procedures should be followed. The granting of leases next May will not permit the input in the Environmental Protection Act. I mentioned the act in the coastal area and airport area. It saved us in many respects.

Senator STEVENS. Why couldn't it save you now?

Mrs. RUSSELL. Because of the time schedule given for the May granting of the leases.

Senator STEVENS. That is only if the final decision of the impact statement is to go ahead. You don't know what it will be.

Mrs. RUSSELL. We feel the determination and movement of the Federal Government with Project Independence as well as what they have stated on granting leases and the administrative work being done, really indicates that they intend to railroad through the granting of the leases in May and that the environmental impact statement will be made to appear that it is the correct action to take. We feel we have to take steps like this outside that EIS procedure to make sure that not only that procedure will be followed, but some of the others, too.

I think another feature not only of the environmental impact statement, but the relationship to a Federal economic policy is essential. The concerns for other alternative methods of energy sources, for looking to future generations—I have heard even the gas and oil producers say that future generations, when they look to the use of petroleum products for chemistry or agriculture, fertilizers, for which petroleum is irreplaceable, will look back and find we burned it all up.

In this case, we feel the outside forces or the forces of the Federal Government are such that they will override the environmental impact statement.

Mr. DOSTEL. We can all address ourselves to that subject and we are concerned that the action taken to date indicates that the machinery is in motion to adopt these leases and we are concerned about this. We don't want to be placed in the position of having to expend large sums of money for legal expenses to enjoin the Federal Government from doing something we do not believe should be done in the first instance.

Mr. HOLM. I think that, Senator Stevens, you may not be aware of some things that have taken place here in southern California. We have had representatives from the administration out here telling us we have to open up this area out here for oil exploration.

There have been statements of the Federal Energy Administrator to that effect in which he was berating us publicly for what he in so many words characterized as a parochial attitude. Because of this and other things from the Department of the Interior, we are appropriately cynical about the whole progression.

The environmental impact statement written for the reopening of the leases in the Santa Barbara Channel speaks to the same kinds of problems that the EIS written for these leases would speak and it found it was fine to go ahead. They have the same problems up there with respect to seismicity but they don't have the deepwater problems we have here.

That is the answer to your question. We presumed and I think accurately, unfortunately, that the people who will really make the decision at the highest level, have already made the decision.

Senator STEVENS. Am I to presume you have made the decision you don't want leasing at all?

Mr. HOLM. I think you would get a variety of responses on that question but one unanimous response would be that the process is being railroaded. In order to make an intelligent decision and understand the implications, we have to have a more relaxed procedure for talking with each other and for making sure all the premises on which the decision is based are appropriately ventilated.

That is our real concern.

Mr. VAN DEN STEENHOVEN. I concur.

Senator TUNNEY. Thank you very much, members of the panel. We appreciate your being here. Because of some difficult timing problems and scheduling conflicts, we are going to call for 5 minutes. Assemblyman Kenneth Cory has another engagement he must meet and after that, he will be followed by Duke Ligon.

Mr. CORY. If the other gentleman has to catch an airplane, I can be late for my next appointment.

Senator TUNNEY. Why don't you go ahead. You have another appointment conflict. Why don't you present the report that you were responsible for as chairman.

Mr. CORY. You wish me to confine my remarks to 5 minutes?

Senator TUNNEY. We have a problem.

Mr. CORY. That is why I prefer to wait.

Senator TUNNEY. I think we should do it that way then, because he came all the way out here to appear at the proceedings.

STATEMENT OF DUKE LIGON, ASSISTANT ADMINISTRATOR FOR RESOURCE DEVELOPMENT, FEDERAL ENERGY ADMINISTRATION; ACCOMPANIED BY JACK WILLOCK

Mr. LIGON. Do you have a copy of our statement?

Senator TUNNEY. Yes, thank you. Please proceed.

Mr. LIGON. Thank you, Senator Tunney. It is a pleasure to be here and I appreciate your consideration in regard to my time constraints. I am delighted to be here today to discuss the issues of offshore leasing, especially as they relate to Project Independence and leasing off the State of California. Mr. Jack Willock is here also, from the Office of Oil and Gas. If it is all right, I would like to summarize parts of the statement as we go through.

As you know, the impetus for Project Independence was the oil embargo, and the goal of Project Independence is to decrease our dependence on foreign energy suppliers so that we may substantially reduce the national, social, economic, and political vulnerability that results from such dependence.

Broadly speaking, the major objection to offshore leasing has been on environmental grounds. In this regard, I want to stress several points.

First, the goal of Project Independence is to develop our energy resources in an environmentally acceptable manner. As an example of this, the FEA has, as in the case of legislation dealing with Hells

Canyon, voted "no" on an energy project because of environmental considerations. And we fully intend to continue considering environmental factors in energy policy decisionmaking.

We heartily endorse the environmental impact statement process, in that environmentally sensitive areas are screened out of the lease bidding process.

Second, we recognize that there is always the possibility of an oil spill, whether from platform operations or, more likely, from tanker collisions. Effective technology and management procedures exist, however, to reduce the environmental hazards of oil spills to a minimum.

I feel it is also important to state at the outset that the FEA endorses the concept of regional participation in government decisionmaking. We are fully aware that local conditions vary significantly, and that local officials and the general public should and must play an important role in energy matters.

Our regional offices are highly instrumental in our policy planning and implementation processes. Indeed, the main reasoin that we have held and are holding public hearings on Project Independence was to receive public and regional input in the development of our blueprint.

Having given an overview of FEA's position on several broad but relevant issues, I would like to focus on the more specific areas of concern that the committee requested us to address, namely:

1. OCS devleopment of the southern California coast in relation to national energy needs;

2. The timing of the lease sale as it relates to the establishment of California's coastal zone management program: and,

3. The need for more substantive state and local participation in the Federal leasing decisionmaking process.

The outlook for petroleum supplies through the second quarter of 1975 is, generally speaking, optimistic. We do anticipate shortfalls in liquid petroleum gases—LPG's—particularly propane, however, and natural gas curtailments of firm volume deliveries are expected to be 80 percent higher than they were last winter. The combination of a severe winter, a coal strike and the natural gas shortage could mean job layoffs and economic hardships.

It is vitally important that Americans not become lulled by the overall optimistic prediction of energy availability. So long as a large percent of our energy is coming from a fully operative OPEC cartel, we, as a people, are highly vulnerable to actual embargoes, exorbitant price levels, or production cutbacks, all of which can impact harshly on U.S. consumers.

OPEC world oil control has already had severe repercussions on the fragile fabric of international trade and the world economy. While the general public may view last year's embargo as the most serious effect of OPEC oil control, the subsequent price increases have thrown chaos into the international monetary structure.

The embargo, plus its aftereffects, makes imperative the need for efficient and timely development of our domestic resource base. To reverse past trends, we must provide an economic climate that is both stable and conducive to the revitalization of U.S. petroleum activity at home.

The arguments in favor of a scheduled lease sale in the southern California area include the following: First, we now know the im-

portance of establishing a workable schedule which industry can rely on to make appropriate investment decisions. Investment dollars are deterred where regulatory and leasing uncertainty exists.

Second, it is important to offer new lease acreage with good resource potential. While the southern California resource base may be limited in comparison to other larger regions, there is more certainty that petroleum exists in this area than in areas where drilling has never taken place, such as on the Atlantic OCS.

Third, although oil will eventually emerge from Alaska to the point that an oil surplus may exist on the west coast, the oil found in the Federal domain off California's coast would well benefit areas beyond the State's boundaries. In addition, the increased availability of natural gas would help the air pollution problem in southern California itself.

California leasing is also favorable from a technological standpoint. It is easier to drill in areas closer to the mainland than farther out at sea. Weather conditions, moreover, make the California area attractive for resource development.

On the other hand, we understand that, from the State's point of view, there may be significant reasons why the proposed lease sale for southern California should, at least, be postponed or abandoned totally.

Pursuant to the Coastal Zone Management Act of 1972, various coastal States have undertaken the development of coastal zone management programs designed to insure the orderly development of their coastlines. Under the act, 30 coastal States and 4 territories are eligible to apply to the National Oceanic and Atmospheric Administration, Office of Coastal Zone Management, for funds to implement programs which meet certain specified criteria including adequate consideration for the siting of energy facilities which have more than local importance.

As you know, the State of California passed its own Coastal Zone Conservation Act in November 1972, and has since become a pioneer in this field. The California law, popularly known as proposition 20, was adopted by an initiative vote of the people of California and established a California Coastal Zone Conservation Commission, and six regional commissions. These commissions are now in the process of preparing a coastal zone management program to be submitted to the California Legislature for approval by January 1976. In the interim, they have been given authority to issue permits for any proposed construction from 1,000 yards landward of mean high tide and the 3-mile limit.

The Interior Department had published a schedule which called for a southern California OCS lease sale in April or May of 1975. This has been the consideration of witnesses here this morning as well as to persons in the State. That schedule was, of course, contingent upon the completion of the prelease investigations for possible social, economic, and environmental impacts.

The Secretary of the Interior will make the final decision regarding the sale only after all information is received and carefully considered. He may then decide to offer all tracts covered by the prelease investigations, remove certain tracts whose development may have serious environmental effects, or not conduct the sale at all. No decision

will be made, however, until all of the ramifications of that decision are thoroughly examined.

Those who object to the proposed lease sale apparently feel that an oil and gas lease sale next year might conflict with the terms of California's coastal zone management plan which is in its developmental stages and is scheduled for completion in January 1976. The suggestion has been made that the proposed lease sale be delayed until the State's plan is complete, and it would seem that some flexibility in the timing of the proposed lease sale could be negotiated.

On the other hand, it should be recognized that there is a significant leadtime, involving years, between a lease sale and actual drilling and production. It could well be that, even if the lease sale were held prior to the completion of the State's coastal zone management plan, onshore facilities to process increased oil and gas production would not be needed until the plan had been presented to the State legislature and, hopefully, ratified in a timely manner.

Consequently, the actual location of additional facilities could still be accomplished in an orderly and rational fashion designed to meet State and regional concerns and important environmental safeguards.

In regard to the issue of State and local participation in Federal leasing decisionmaking, several steps are involved under the present system:

1. An area is selected for nomination of tracts by industry.
2. A number of tracts are designated for study from the nomination.
3. Environmental information is gathered by the Federal Government.
4. A draft environmental impact statement is prepared considering the effects of leasing and development on the environment.
5. The statement is published and offered to the public for comment.
6. A public hearing is held to receive comments from all who wish to testify. Written comments are reviewed regarding the contents of the statement.
7. All information is considered in the preparation of a final environmental impact statement.

These steps are all preliminary to the Secretary's decision to lease OCS lands. The procedure is designed to assure the opportunity for all responsible public and private points of view to be expressed. Interested parties are encouraged to involve themselves at appropriate stages in the development of the environmental impact statement.

A final secretarial decision on OCS leasing assumes that National, State, and local governments have been involved in the process from beginning to end.

In conclusion, FEA recognizes the pros and cons of the issues under discussion here today. Because of the long leadtimes involved, we feel very strongly that key steps must now be taken to meet more fully the Nation's future energy requirements with domestic energy. At the same time, we firmly believe that Project Independence must be the product of close cooperation between Federal, State, and local governments. Energy resource development and long-term environmental management programs must be built on a solid formation of cooperation among partners, each understanding the other's views and working hard to seek mutually acceptable solutions.

As the time approaches for a final decision on the proposed lease sale, we expect to play a strong role in the decisionmaking process, along with the State and local representatives participating through the public comment procedure. I am confident that, together, we can meet the challenge that seemingly irreconcilable views now appear to present.

Thank you for the privilege of appearing before you today. I will be happy to answer any questions you may have.

Senator TUNNEY. Thank you, Mr. Ligon. Because of a limitation of time, we are going to have the 10-minute rule. I will question for 10 minutes and then turn it to Senator Stevens for 10 minutes.

I noted in your testimony that you at least anticipate a possible delay in the lease schedule by the Interior Department.

You are taking a position somewhat different than the Interior Department's position and also different from, at least the way I interpret it, Mr. Sawhill's statement last month. Could you please amplify why this is so? I assume your statement was approved at the highest level.

Mr. LIGON. I think it is important for me to indicate I do not speak for the Department of the Interior, but we work closely with the department on many of these subjects. It is clear that the decision on this particular lease sale has not been made and will not be made until the appropriate steps have been taken.

Mr. Sawhill's comments with regard to the development of lease properties and sales here in southern California was a reference to its potential, if in fact the decision was made to go in that direction.

That decision has not been made and he has indicated to me since his statement that he in no way meant to convey to the public or people that the decision had been made or was firm.

My statement is not inconsistent with that of the Department of the Interior or of Mr. Sawhill.

Senator TUNNEY. Well, some of us had a different impression.

I am glad to hear what you are saying. You are saying it obviously with the approval of Mr. Sawhill. There are some of us that feel strongly we ought to be consistent with the intent of Congress and the President when he signed the Coastal Zone Act. I am referring now to Public Law 92-583 which is part of the Marine Resources Engineering Development Act of 1966, as amended.

I note that legislation in section 407(C)(3), that there is a provision called the "Federal consistency provision." It states that after approval by the Secretary of Commerce of a State's management program, any applicant for a required license or permit to conduct activities affecting land or water use in the coastal zone of that State, shall provide in the application to the licensing and permitting agency, a certification that the proposed activity complies with the State's approved program and that such activity will be conducted in a manner consistent with the program.

In other words, before an oil company could drill off the coast of California, they would have to be able to demonstrate that they had certification from the State Coastal Commission.

I could not help but feel that the Secretary of the Interior's decision to go ahead with leasing 1.6 million acres of land off the California coast was done in a precipitous way in order to avoid having to comply with this section of the law as passed by Congress.

Mr. LIGON. I think there is no intent to avoid compliance with that law. I think it is clear in what it says and Interior will comply with it.

Senator TUNNEY. We are not going to have completed our State Coastal Commission report until 1975. The legislature will then act in 1976. The Department of Interior, as I understand it, is hoping to start the leasing program in May of 1975. You are suggesting that the Department of Interior will delay the leasing program until such time as the Coastal Commission study completes the coastal zone management program.

Mr. LIGON. I am suggesting there may be a possibility a delay, yes, sir.

Senator TUNNEY. Do you believe the FEA might agree on the need to delay until the plans are completed?

Mr. LIGON. The FEA agrees that we should receive public input before major decisions are made, and we hope the Department of Interior follows that procedure.

Senator TUNNEY. Meaning we wait until the Management Plan has been approved by the Coastal Commission?

Mr. LIGON. If that is necessary, yes, sir.

Senator TUNNEY. I don't mean to be a prosecuting attorney but I think a greater degree of precision is needed for me to understand it.

Mr. LIGON. My hesitancy is that I can't speak for the Department of the Interior.

Senator TUNNEY. Can you speak for FEA?

Mr. LIGON. Yes, sir, I can.

Senator TUNNEY. Does FEA feel there should be delay until after the Coastal Plan is completed?

Mr. LIGNON. That is the feeling at the present time, yes, sir.

Senator TUNNEY. Thank you. I am very pleased to hear that. I think that this is really an extremely fine statement that you have made and one which, I might say, knowing the kind of problems that you have—everyone attempts to take positions which are matters of conscience but knowing the perils that lie sometimes in taking those positions of conscience—that yourself as well as Mr. Sawhill and others in the FEO are to be highly commended for taking the position you have just taken here today. Obviously this position was taken with the approval of Mr. Sawhill; because it does represent a significant change in what we have heard in the past, and shows a much greater sensitivity to the needs of local governments and citizens at the grass roots level to have an opportunity for maximum input before the Federal Government, by fiat, makes decisions which will dramatically affect their lives.

Mr. LIGON. It is clear that the Congressional authority for this kind of final action rests with the Secretary of Interior. But obviously, in the energy circle in Washington, we have a significant input in the final decisionmaking and that is what we are talking about here today.

Senator TUNNEY. It is, and the Congress has repeatedly made it clear that it feels there should be maximum amount of State and local government input as to the timing and location of drilling offshore. It has made it clear it wants coastal zone management to be considered by the Department of Interior as part of leasing decisions and also it has made it clear it feels it is important that the onshore de-

velopment of an infrastructure be taken into consideration before a leasing decision is made offshore.

As you have just heard from local government officials, many feel there would be serious adverse impact on off- and onshore environment should you go forward with offshore drilling off the Santa Monica-Newport Beach areas.

Senator STEVENS. I don't want to disagree with you, my good friend, but I am sure Mr. Ligon understands the concept of the coastal zone. I worked on that bill, and it only applies to the territorial sea. You are not talking about that anyway, are you?

Mr. LIGON. That is correct.

Senator STEVENS The Coastal Zone Management Act of 1972 applies more to onshore development in relation to refineries than it does to OCS leasing activities. OCS is more at issue here.

Mr. LIGON. That is correct.

Senator STEVENS. I know you have problems with regard to the concept of leasing in the Gulf of Alaska, is that right?

Mr. LIGON. That is right.

Senator STEVENS. Is there any place in the country you propose to lease the Outer Continental Shelf that you don't have problems with?

Mr. LIGON. No, Senator Stevens. It was announced that a program to put 10 million acres into lease would be the goal for 1975, and it was estimated that 16 to 20 million might be put up to be looked at during the process as far as tract selection is concerned. Whether or not it is attainable in that period of time is not clear.

As you pointed out, there isn't a single place that we haven't had some problems. The Gulf of Mexico, because of past development, has been the area that is most accessible to further development, but generally speaking, we've had problems with every area.

Senator STEVENS. The Louisiana sale was enjoined and, the people of Delaware and the east coast objected strenuously to exploratory seismic work.

Mr. LIGON. It is true in Maine and offshore Texas as well as every other area we have looked at.

Senator STEVENS. In reality, a proposal to lease offshore OCS lands anywhere faces a hearing similar to this one, doesn't it?

Mr. LIGON. Yes, sir. That is correct.

Senator STEVENS. Thank you very much. You have got a tough problem.

Senator TUNNEY. We have—I have a substantial number of questions I wanted to ask you. On the other hand, I don't want you to miss your plane because you have to participate in the Economic Summit Conference.

Mr. LIGON. If you would allow me to take the questions, I will submit the answers for the record for you.

Senator TUNNEY. That is what I thought. On Monday, I would send them over to you and then you could answer them in writing so we could have them as part of our record.

Mr. LIGON. We will get the answers back to you as soon as possible.

Senator TUNNEY. I want to thank you very much for coming all the way from Washington to be here today. I particularly appreciate

the fact you have indicated that the FEA has a position of flexibility as it relates to timetables for offshore drilling in southern California. I think it relates a significant change, at least as I understood the FEA's position, and I think it is perfectly consistent with the attitude of Congress that there should be local and State government and coastal management input prior to the time the leasing takes place.

I think it demonstrates the FEA, at least, has had its ear to the ground and recognizes there is a substantial body of opinion in California that feels that it would be wrong to go ahead with such a leasing program without adequate local input.

Thank you for the statement and for being here.

Mr. LIGON. Thank you, Mr. Chairman.

[The questions and answers follow:]

FEDERAL ENERGY ADMINISTRATION,
Washington, D.C., October 11, 1974.

Mr. JOHN HUSSEY,
Director, National Ocean Policy Study,
U.S. Senate Commerce Committee,
Washington, D.C.

DEAR MR. HUSSEY: Senator John V. Tunney has requested that the Federal Energy Administration (FEA) supply the answers to five questions posed in his letter to me on October 2, 1974. Listed below are the five questions with the corresponding answers.

1. Question. Based on information available to FEA, to what extent may materials shortages, particularly tubular steel products, affect the implementation of the lease schedules proposed off the coast of southern California?

Answer. With this time lag, it is the belief of FEA that materials shortages, particularly tubular steel products, will not delay exploration and production of the leases involved. The shortage of these materials is already beginning to abate and should not be a serious problem next summer. At the Senate Commerce Committee National Ocean Policy Study Group Hearing in California on September 27, 1974, Mr. David E. Lindgren, Deputy Solicitor, Department of the Interior, made the statement that no decision will be made on the holding of a lease sale for California offshore Federal lands prior to next summer.

2. Question. In the development of the "blueprint" for Project Independence, to what extent has FEA consulted with the coastal states which may be affected by the accelerated leasing program?

Answer. In the development of the "blueprint" for Project Independence, FEA has had considerable input from state representatives and interested citizens at the various Project Independence Hearings around the country. In addition, FEA has relied on various task forces to deal with specific energy sources. The task force assigned to oil is chaired by Dr. V. E. McKelvey, of the United States Geological Survey. This task force was charged with predicting production of crude oil given certain parameters such as price, governmental regulations, land availability, etc. FEA does not say that a certain amount of offshore land should be leased, only that if it is leased that a certain productivity can be expected.

The leasing schedules are determined by the Department of the Interior (DOI) and more specifically the Bureau of Land Management (BLM). The BLM and DOI have been in constant consultation with both the State and local governments of the State of California.

3. Question. What rationale compelled FEA to hold hearings on development of OCS oil and gas in Atlanta, Georgia, rather than Los Angeles, California, when the announced leasing schedules would affect the southern California coastal communities first?

Answer. FEA regional hearings were held at widely spaced locations in the United States so that interested parties would have a minimum distance to travel to participate. Although different items of special interest were emphasized at each regional meeting, the meetings were open to the discussion of any item desired by the participants. There was no rationale that deliberately located the hearing where Outer Continental Shelf (OCS) lands were featured away from Los Angeles. The coastal states bordering the Gulf of Mexico and the Atlantic

Ocean are also interested in the treatment of OCS lands. At the time of the hearings, Folrida had a wildcat well drilling in the OCS adjacent to its jurisdictional waters.

4. Question. From the perspective of FEA, do the Federal agencies responsible for administering the OCS lands and for planning future energy development strategies have access to sufficient geophysical and other relevant data to adequately plan and administer the programs on OCS lands?

Answer. The Federal agencies have, at this time, more technical information regarding operations on the OCS than at any other period. For several years the Department of the Interior has been acquiring larger quantities of reliable geophysical data. Measures are being taken to improve the rules regarding the disclosure of proprietary geological and geophysical data to the DOI. In this regard, new rules were proposed in the *Federal Register* on May 16, 1974, and public hearings concerning the proposals were held on July 15, 1974. The revisions are expected to be published soon.

The DOI receives all downhole-well information desired from operators as it is developed, thereby maintaining up-to-date operational information in all areas. FEA believes that the responsible Federal agencies have preliminary information sufficient to properly plan for and administer the OCS lease scheduling programs. Before actual lease sales take place, a considerable amount of additional information will be accumulated in preparation of the environmental impact statement required in each sale lease.

5. Question. Is FEA, or some other lead agency, attempting to evaluate the cumulative and interactive impact of locating oil and gas production facilities, terminals offshore, while at the same time siting conventional generating stations, refineries and transfer terminals onshore in the coastal zone?

Answer. A Federal agency is required by the National Environmental Policy Act (NEPA) to prepare an Environmental Impact Statement (EIS) prior to taking any action (such as issuing license or permit) significantly affecting the human environment. In those cases where several Federal agencies are involved in a proposed project and there is uncertainty as to which is the lead Federal agency, the President's Council on Environmental Quality (CEQ) can designate a lead agency.

Our Office of Siting and Regulation is preparing a series of energy assessments of major proposed energy projects. These assesments will examine the need to be satisfied by a project, alternative ways of satisfying that need, and alternative use of the resources to be consumed by that project. Such energy assessments will satisfy certain portions of the NEPA requirement. At present, this office is preparing an energy assessment of the Kaiparowits Project, a 3,000 megawatt electric generating station in southern Utah. This assessment is being conducted in consultation with the Bureau of Land Management. The Office of Siting and Regulation is also starting work on an energy assessment of two refineries proposed for construction in the State of Maine. A deepwater port may be proposed in conjunction with one of those refineries. This office would also conduct an energy analysis for a complex of facilities such as that described in Senator Tunney's letter.

We hope the answers to these questions will be of use to the National Ocean Policy Study.

Sincerely,

DUKE R. LIGON,
Assistant Administrator Energy Resource Development.

Senator TUNNEY. Assemblyman Cory, it is a real pleasure having you before the committee as Chairman of the Joint Committee on Public Domain of the State Legislature. You have been a leader in studying the problems of offshore drilling and I know your statement will be most meaningful to our committee.

STATEMENT OF KENNETH CORY, CHAIRMAN, JOINT COMMITTEE ON PUBLIC DOMAIN, CALIFORNIA STATE LEGISLATURE

Mr. CORY. Thank you, Senator. It is a pleasure to be here.

I would like to give some indication of the context from which the comments come. I share the knowledge of the environmental concerns

that have been expressed by others, although I do not classify myself as a person that believes offshore drilling should never take place. I come to this conclusion having been involved in the State of California leasing activities in the last 7 years. I am very pleased to be here and I think the existence of this committee marks a Federal legislative concern in matters too long left to and abused by the executive branch.

The fact the committee sits today in California signals important recognition that California offshore problems are unique. We have been made acutely aware that the Federal Government intends to lease the shelf lands quickly and on its customary terms under the cover of meeting an energy emergency program.

The tenor of Project Independence and of the recent environmental impact hearings in this area have made it all perfectly clear. The question is not whether the shelf oil resources would be leased or on what term, but only how soon. Until the testimony prior to this statement, I was totally convinced that was the only question before us and I see some small glimmer of light. The thing that disturbs me about the statement is it is from a man who has no ultimate authority, and our term in Sacramento is "Leave room from the double cross."

In the tradition of Judge Roy Bean, the Law West of the Pecos, they have already reached their verdict but will give us a fair trial before the hanging.

This approach is nothing new in national energy policy. As it was described by Secretary Morton to the oil industry leaders just over a year ago: "Our mission is to serve you, not regulate you." And the hasty leasing of the OCS lands, before we have a chance to balance the real State and national interests, will indeed serve those companies well.

We can no longer afford to set national energy policy to meet the wishes of that small group of large private companies who already control our energy supplies. We do have an energy inflation that is a real emergency. Yet the specter of that emergency is being used to stampede us into continuing policies which created it—disposing of the vast energy resources of our Continental Shelf on the ill-considered terms which will leave future supplies in the hands of the same self-interested and highly cooperative group of major oil companies; which will permit environmental degradation that is wholly unnecessary and that we can no longer afford, and which will mean an almost complete abandonment of free enterprise competition in energy.

Let me emphasize that last point because I think there are others in a better position to deal with the environmental question. I deeply believe that the principle of free enterprise competition is most important, that the best economic system is one in which anyone with the courage and know-how can go into a business and make a fair profit by providing society with the goods it needs under the conditions it demands.

Yet now, as over the past, the current Federal big bonus leasing policies effectively eliminate any possibility that any small company or group of companies can compete. The Government policy, in effect, does for the major companies what they dare not do openly for themselves.

And unless there is an effective and immediate congressional intervention in the leasing process, to give full scope to all of the factors

which should be considered, we will see the consumption of a land grab by the major companies on the California Outer Continental Shelf which will, for generations, deprive our citizens of the real benefits of the resources they own.

The factors to be balanced in arriving at a serviceable leasing policy, but which will be ignored if the present rush to lease is successful, are many and complex. The Joint Committee on Public Domain, charged by the California Legislature with responsibility to oversee administration of State tidelands, has just approved a report on its hearings and extensive staff studies into the considerations which are relevant to offshore oil resource exploitation. Most of what I say here is set out in greater detail in that report and I will submit copies for your record.

In substance, however, our studies make clear that offshore drilling here, whether on the State tidelands or the adjoining outer shelf, peculiarly and especially affect Californians alone, not only in environmental impact, but in the use of the energy resources ultimately produced.

For California citizens, whose beaches will be fouled by any carelessness in drilling, are next-door neighbors to the refineries which will process any oil found, and they will be the purchasers and consumers of any products made from that oil. I would like to point out the parochial aspect. If you look at the economic unit of petroleum in California, it is a closed system. Virtually all the oil refined here is consumed here and the concept of it may be used elsewhere in the Nation, if you want to get it out of California, you have to build pipelines to get it out of California. So, you can't rely on that in the environmental impact statement.

Our interests are at stake to a degree beyond that which affects any other outer shelf area, both our economic and our environmental concerns.

We have made considerable progress in understanding the special economic and environmental concerns affecting our coast and our consumer, which will be made wholly futile by the rush to lease. For it is very apparent that the hasty disposal of the shelf resources on the traditional terms will entail a serious potential for economic and environmental damage which substantially outweighs any possible immediate need.

Note especially that I emphasize both economic and environmental impacts. Both are relevant and highly important. So far, however, only a lip service has been paid to the environmental impact requirements, and none at all to the equally important question of the terms on which the energy resources involved will be produced, paid for, and resold for our benefit.

Were there a statute, as perhaps there should be, that Federal agency action be truly and completely justified in terms of its impact on our competitive economy, it would become immediately apparent that the effect of this leasing on competition is as much a peril to free enterprise competition as it is to the environment we seek to preserve.

I believe that we must have domestic, low-cost energy supplies. I believe that we must protect the environment against degradation. I believe that careful Government action can insure a careful balance protecting both interests. And I am absolutely sure that such a bal-

ance is totally impossible under the hurried terms now proposed to meet our "energy crisis."

First, what is the rush? The leases to be granted will not produce any substantial amount of oil in the next 3 years, and probably not for 5. That is a conclusion based on experience: Exxon, Arco, and Socal purchased Santa Barbara Channel leases in 1968 on tremendous bonus bids. Exxon alone spent a quarter of a billion dollars.

Exploratory drilling has proceeded over 6 years, interrupted somewhat by the moratorium that followed the 1969 blowout. Approval for construction and installation of the production facilities was granted this month. Significant production, however, is scheduled to commence in 1977, 3 years after final approval, done last month, and is not anticipated to reach full rate until sometime later.

Nor is this an exception. The average experience of offshore leasing indicates a leadtime of from 2 to 6 years, whether in California or the Gulf of Mexico. Within that time, either California will have found other means to accommodate to the need, or its economy will have dissolved under the inflationary impact of energy shortages and costs.

One obvious source is increasing domestic production from onshore. I will try to spell out the detail of how the low price of California crude oil was enforced by the cooperation of the major companies.

But that price, not supported by FEA, has seriously retarded the development of the known reserves within the State, without producing any low price of products for the consumer.

It is certain that a very great deal more oil can be brought into production in this State within a short time, if that crude oil price were brought into parity with other parts of the country, and that this could be done without any increase in consumer cost, if FEA was willing to do it.

Another obvious source is Alaskan oil. Within the same time that must elapse before production from the leases scheduled to be given out in May 1975, the companies which are the most likely bidders will be enjoying the benefits of a flow of at least 1½ million barrels a day from the vast reserves they jointly control on the North Slope.

Indeed, should they schedule full flow from the Prudhoe Bay field, and build the trans-Alaskan pipeline to full capacity initially, they will have over 2 million barrels a day.

To put those figures in context, remember that the whole west coast area now uses only about 2¼ million barrels a day. The Alaskan oil quite literally could flood the market here.

The leadtime is virtually the same as the leases they are anxious to put to bid next May. There is, in short, not such an immediate promise of oil from these leases that we must proceed immediately or face a shortage.

Nor is there an immediate need for money into the Treasury. Over many years, the practice of "big bonus" bids has produced substantial, one-time increments of revenue to the United States without increasing taxes. Mr. Roy Ash, Director of the Office of Management and Budget, has recently said that raising revenue is one main purpose of accelerated leasing.

But a one-shot increase in revenue comes in large part at the expense of a larger return from the oil over time, and at the expense of the competition otherwise to be offered by smaller companies.

The Federal Trade Commission is even now considering antitrust charges against the major companies relating to the anticompetitive production partnerships which big bonus bidding requirements have been used to excuse. Even the Department of Interior, hardly an enemy of Big Oil, is currently considering some minimal restrictions on such joint operations.

Nor does it make sense for the Government to be a party to the practice. On the one hand, the Government imposes a huge, front-end need for immense capital investment; and, on the other, it then grants special price incentives and tax deductions to minimize the impact of the ordinary capital requirements of this business in order to encourage domestic production.

While I have not seen any careful economic analysis of these mutually contradictory actions, I suspect the net fiscal effect is near zero.

However, there is a great deal of effect on the industry, and all of it negative. Even for a large major company, bidding alone to get an offshore lease, the bonus requirement means that it must dedicate a very substantial portion of total capital available just to get the right to drill.

Of course, it will then proceed to return that capital from sales of products to domestic consumers. But now, when we are exploring every means to provide domestic supply as an insurance policy against the political and economic aggression of the Arab States, does it make any sense at all to set this additional capital barrier to domestic drilling? I think not. This is under other tax considerations you should be aware of because we are trying to increase domestic production. That is the foreign tax credit. We will never reach domestic independence on oil as long as we offer foreign tax credits to oil companies.

They can make more money finding oil without the United States than within. The other requirement on the tax structure is the bonus bid system. It gives legal justification for the people—oil put out through the mechanism that the major integrated oil companies who receive the bids are entitled to deductions on that basis.

But the bonus bid requirement is not the only counterproductive part of the traditional lease-letting procedures. The history of Outer Continental Shelf leasing indicates that the process of selecting the areas to be explored and leased has been left to the discretion of the industry, principally to its larger member.

It is unduobtedly this process which has focused current attention on the southern California borderland Outer Continental Shelf. But it is not a very good process.

For one thing, we must note in passing that the companies involved have more than a little opportunity to use inside information and contact in getting those areas put up for lease on which they can then bid to best advantage.

But, even more important, it means that the buyers in a Government sale have far more information than the seller, as to the value of the item sold. This is usual in Department of Interior leasing. One recent sale of shale lands brought a bonus that was several thousand percent higher than the Interior valuation. It is absolute nonsense for the Government to be selling valuable resources, before it knows what the resources involved might be.

Indeed, such outright sale of the resources is itself under any circumstances highly questionable. No other country on the face of this earth follows a policy of outright sale of its publicly owned mineral resources.

By retaining an ownership right, a government retains a direct control over the resource itself which cannot be matched by indirect regulation of the operation of private companies exploiting properties they pay for.

Environmental regulation, for example, can be more easily accomplished where the government ownership is retained. Look at the State tidelands development in Long Beach Harbor—it is important to realize we lease under both the bonus bidding and net profit operating contract. The Long Beach is under the net profit operating contract—where both environmental and economic concerns can be effectively protected.

Even though there has been somewhat less than careful concern with the economic factors, as the Joint Committee has reported, the special and intense environmental concerns with subsidence, beach protection, and visual pollution have been satisfactorily met. This could almost certainly not have been accomplished without the retention of ownership required by the legislature.

At the same time, wise Government contracting procedures, in lieu of outright sale, could insure that there would be adequate protection for our economy. After some 7 years of careful investigation, the Joint Committee has been able to establish that the State was seriously underpaid by companies purchasing oil from the Long Beach unit at phony posted prices.

Thanks to the fact that the State was owner-contractor, not merely a royalty owner, it will be able to recover the moneys involved.

And, as far as the participation of smaller companies in the oil produced from that unit, the terms of the operating agreements did allow for the selloff of increments of the production for the benefit of smaller refiners.

While the administration of the selloff provisions was something less than enthusiastic, the provisions involved do point a way in which we can retain the benefits of independent competition by such contracting.

In summary, then, we in California have a special and unique situation with relation to Outer Continental Shelf leasing.

I think it is important to realize what is going on in attempts of the oil companies to have written, laws that benefit themselves and injure the people of California.

Only you can change that and I think it is imperative it be changed prior to the headlong rush in perpetuating the oligopoly that exists in California.

Senator TUNNEY. Thank you, Assemblyman Cory. Your report of the Joint Committee on Public Domain and Offshore Drilling will be included in the record.

I would just like to ask you, as head of the Joint Committee on Public Domain, what consideration did the Department of the Interior give to the Legislature's views prior to the time they announced their leasing decision?

Mr. CORY. None, I am aware of. There are other legislatively passed resolutions urging them to step back and look but their announcement came more as fiat from the executive branch of the Government and it is high time we get people involved through the legislative branch to change that.

That essentially is the way it was handled.

Senator TUNNEY. What is the assembly doing to speed up the Coastal Commission's management plan study, if anything?

Mr. CORY. What we have done is try to do the best we can. We have given the Government leeway in this State in terms of appropriating the resources so that the Coastline Commission can proceed.

I think it is important, frankly, that we politicians stay as much out of that as we can, because I think it has to be developed by the people rather than those of us in the political arena.

Senator TUNNEY. I agree with that. I am wondering what kind of funding the commission has received?

Mr. CORY. I think there will be testimony on that from other legislators. We do have a unique situation in California. The Governor has a line veto on appropriations. He can reduce it to any level he sees fit. Unles you have two-thirds in each house concurring, you have the unilateral decision of one man. We find the amount budgeted taking the pragmatic views of that one man.

Senator TUNNEY. Do you think it is possible for the legislature to approve coastal management plan in California prior to 1976?

Mr. CORY. I would be hesitant to say so, though the signs are encouraging that people sympathetic to that will be taking office soon, but I would hesitate to promise anything sooner than that, because we have lost time already.

Senator TUNNEY. I noticed that the assembly on April 18, 1974, adopted a Resolution No. 108, which basically stated that the legislature feels that the Federal Government should refrain from granting offshore oil drilling leases in California coastal waters until a comprehensive national energy policy is established.

Mr. CORY. A day later we passed one tougher and I would make sure you get a copy of that also. It seems incomprehensible that the Federal Government could be proceeding in a Project Independence without having formulated basic energy policies of this Nation as to how to proceed.

I have trouble in terms of my limited mental abilities of imagining the concept we are proceeding on to become self-sufficient on energy, when we have no national energy policy clearly defined. You should do that first, it seems to me.

For example, the classic thing is the fact that the oil from either the Continental Shelf, if that should be leased, or the oil from North Alaska Slope, is somehow going to have to get to the midcontinent. Pipelines will have to be built. To bring oil from Alaska means they will be on barge or boat from Alaska to California or around South America to the gulf coast or we will have to build pipelines. They haven't told us yet.

That is why the national policy should be spelled out first.

Senator STEVENS. I disagree with myopic approach to Alaska oil. That oil is to be distributed equally throughout the United States.

The oil you are currently importing here will not come here as soon as we bring the Alaskan oil to California. A great portion of it will go to Puget Sound and Oregon.

Mr. CORY. The figures——

Senator STEVENS. There will be no surplus into district V because the oil imported here will not come here anymore. I am sure you are familiar with that interesting fight to get the oil to California. Let me preface my remarks by saying, I am a graduate of UCLA and lived a good portion of my life not too many miles from here. It sounds to me like you, and many other Californians, are thinking only in terms of the boundaries of California.

We are trying to deal with national oil problems. Do you think we ought to make the decision as to whether or not to drill offshore in Alaska only on the basis of the needs in Alaska? I would like to have you answer that question.

Senator STEVENS. You heard Mr. Ligon. I know it to be a fact that there is not a place in the United States where it has been proposed to drill offshore that the local people are not objecting, including my State of Alaska.

Mr. CORY. I am not objecting to drilling per se. I am objecting to drilling under these terms and conditions. If I can clarify one point. California is importing 1 million barrels of crude oil a day. That is our total importation. There is a 2¼ million capacity out of the trans-Alaskan pipeline.

Senator STEVENS. The initial capacity is 1.6 million barrels of crude oil a day, the maximum is 2 million barrels a day.

Mr. CORY. There are 600,000 barrels a day going somewhere else other than California. With your concept, we will merely replace the imported oil and that will go elsewhere. We will still have 600,000 barrels a day unless it is handled by barge or pipeline or boat out of California.

Senator STEVENS. The projection of growth in this area indicates that even with the 1.6 million barrels a day, you will still have a shortage unless the conservation plans work and people stop using so much, but Congress mandated the equal distribution of Alaskan oil throughout the United States. We are compelled to follow that mandate as we plan for the distribution of that oil.

You will not have any surplus oil here, but the main point is that we are importing over 6 million barrels a day from the Middle East. If they shut that off again, even with the maximum capacity of our pipeline, we will still be short 4 million barrels a day of oil in this country and that is a lot of oil.

Someone has to plan for additional supplies in the event of that emergency. I was interested in the statement by the lady from Santa Barbara when she mentioned that twice in their resolutions they took into account the concept of national emergency.

I admire that concept because we are close to a national emergency if the Arabs shut us off once more. We will lose one-third of our economy in 6 months.

Mr. CORY. I am opposed to the absolute total demise of any chance of restoring free enterprise competition in the oil industry which does

not now exist in California. I think it is clear in terms of various reports. What I am most concerned about—we have the Uphill's reserve here which is supposed to help us in time of national emergency.

Senator STEVENS. It would require 6 months to get 200 barrels a day. If you started drilling offshore, as you point out yourself, in any one of the offshore areas, it would be 5 years before it is there. The Arabs aren't going to wait 5 years. You say we don't have a national policy.

I think we do and we are moving strongly toward a concept of self-sufficiency. I didn't know I was attending a Democratic rally—I came to listen to facts on whether or not the people have feelings on Outer Continental Shelf development and to try to assure the people that their thoughts and worries will be considered as Congress moves toward self-sufficiency.

That is a national policy, not just the policy of the FEO or the Secretary of the Interior. The Congress has mandated the development of national self-sufficiency, too.

Mr. CORY. I again renew my hope that you as legislators will reexamine the concept under which the executive branch is trying to proceed. Net profit leasing, the elimination of big bonus bid basing is essential.

Senator STEVENS. We have tried competitive royalties. We tried to bring development under the concept of competition. It did not work. If you are going offshore, I would hope you wouldn't want independents who don't have enough money getting involved to go offshore and drill wells. That is the quickest way to have problems, to put people out there doing it on a shoestring.

The major oil industry made this country the most self-sufficient country in the world until the time when Congress eliminated the whole control system as far as overseas oil is concerned.

I happen to agree with you regarding the foreign tax credit. That was a bad incentive and we will do away with it, but we still have the best system in the world today, and the only way to keep it is to preserve and protect the people just as we do preserve the competition here.

Mr. CORY. If I can give to you anything, I would like to suggest to you that the second largest oil field in the continental United States is an offshore field in Long Beach, developed under a net profit concept under which there had not been a single blowout or spillage.

Senator STEVENS. Who developed it?

Mr. CORY. A consortium of companies administered by the city of Long Beach, as trustee, for the State of California.

Senator STEVENS. What companies?

Mr. CORY. Numerous companies.

Senator STEVENS. Part of big industry?

Mr. CORY. Yes, and part of the small ones.

Senator STEVENS. We have innovative things up North, in case you think big industry is running Alaska. Let me disabuse you a bit. The problems we have of dealing with self-sufficiency are part of the energy policy concept, and we are still working on it.

We are ready to announce a billion dollar program for development of solar energy. It is not going to do much good in Alaska, but it might do good here.

We are moving forward on all fronts. As a member of the Appropriations Committee, we have more than tripled the amount of money going into energy research this year alone, and we are moving forward as fast as we can.

This concept of saying to the industry, nominate the area you think has oil potential and then drafting an environmental impact statement that people can comment on doesn't mean development will start immediately. The Alaskan Pipeline case is a good example. We didn't start the Alaskan Pipeline until 1974; the environmental impact statement was completed in 1970. I would hope, if nothing else come out of this hearing, it is Mr. Ligon's statement which my friend thinks is a change of position.

As one of the framers of that bill, I think his statement enunciates the position in the National Environmental Protection Act that the final decision will be made after all the input, comments, and factors have been made. As someone who lived in Manhattan Beach most of his life, I can understand what the people mean when they say they don't want offshore drilling.

As a U.S. Senator, I look at $25 billion of American money going out for Arab oil and that is a hemorrhage, a financial hemorrhage.

That is my statement for the day.

Mr. CORY. I appreciate that. I hope you can look carefully at the concept of changing bonus bid because that is what will be done. I think it is important to look at the concept and consider this.

Senator STEVENS. Could I ask you one question. I think you are articulate, and I would like to ask, has the California legislature taken a position on whether or not the State of California should receive a percentage of the Federal income from development of oil and gas from the Outer Continental Shelf?

Mr. CORY. We were approached by Congressman Ed Willis probably 4 or 5 years ago, to have a share of that reserve for environmental protection.

Senator STEVENS. For the whole mechanism?

Mr. CORY. We approached it and didn't get a great deal of reception on it.

Senator STEVENS. We would work together on that.

Senator TUNNEY. As you know, there was a bill passed in the Senate last week, as it relates to Outer Continental Shelf, which provided a $200 million fund from the revenues of Outer Continental Shelf leasing, to protect the coastal area, to be dispersed among the coastal States for that purpose.

Senator STEVENS. That is a beginning.

Mr. CORY. Thank you.

[The report referred to follows:]

WHAT'S THE RUSH?

ECONOMIC AND ENVIRONMENTAL IMPACTS OF FEDERAL OFFSHORE OIL AND GAS LEASES

An Inquiry into the Impetus for and the Potential Economic and Environmental Impacts of the Proposed Federal Offshore Oil and Gas Leasing Program for the Southern California Borderland of the Outer Continental Shelf.

"I would just like to say at the outset that the Office of Oil and Gas is an institution which is designed to be your institution, and to help you in any way it can. . . .

"In conclusion, let me say that the Department through its Office of Oil and Gas, through the Office of the Secretariat, . . . *Our mission is to serve you, not to regulate you. We try to avoid it.* I have tried to avoid regulation to the degree that I possibly can. We want to be sure that we come up with guidelines and programs where guidelines are necessary, that have a maximum of input by people who make their living in the marketplace. *I pledge to you that the Department is at your service.* We cannot be all things to all people. We cannot straddle issues. We have to do business today and tomorrow."

ROGERS C.B. MORTON,
Secretary of Interior.

(White House Briefing of Oil Industry Leaders Aug. 16, 1973)

PREFACE

The major oil companies are current conducting a land grab of publicly held oil resources in the Southern California Borderland of the Outer Continental Shelf (OCS).

This oil resource acquisition is being conducted with the acquiescence of compliant State and Federal agencies which should instead, be regulating the activities of the giant oil companies in the public interest.

Indonesia receives a 70% share of production revenues from its oil.

Burma receives a 70% share and does not relinquish legal title to its oil resources.

Norway receives a 5% to 40% profit participation and does not relinquish title to its oil resources.

The United Kingdom is proposing to increase its participation share to 51% and retain title.

In the United States we receive an initial cash bonus payment and a token 16⅔% annual royalty participation. In exchange we grant ownership rights of the public oil resource to private corporations for an indefinite period of time.

Additional crude oil for the West Coast will be available in overwhelming quantities from the Alaskan North Slope reserves beginning at a rate of 1.2 million barrels per day in 1977 and reaching capacity of 2 million barrels per day in 1978-79. Standard Oil Company of Ohio, which controls the major portion of the North Slope reserves, has recently announced that it has begun a feasibility study for the construction of a pipeline from California to the Mid-West to dispose of what it already calls the "surplus" Alaskan crude oil.

This report examines the public policy objectives and consequences of the proposed May, 1975, lease sale of Southern California OCS oil and gas resources.

The report concludes that this proposed lease sale should not proceed as scheduled.

In considering whether and, if so, under what conditions petroleum resource exploration and development activities should ever take place on the Southern California OCS, recommendations are made:

For the development of a comprehensive National Energy Policy to include a consideration of energy conservation measures and a designation of exploration priorities for *all* OCS areas;

For the consideration of alternate financial and economic arrangements including profit participation contracts; and

For a continued program of data collection by government agencies as a prerequisite to any intelligent decisions on economic and environmental matters.

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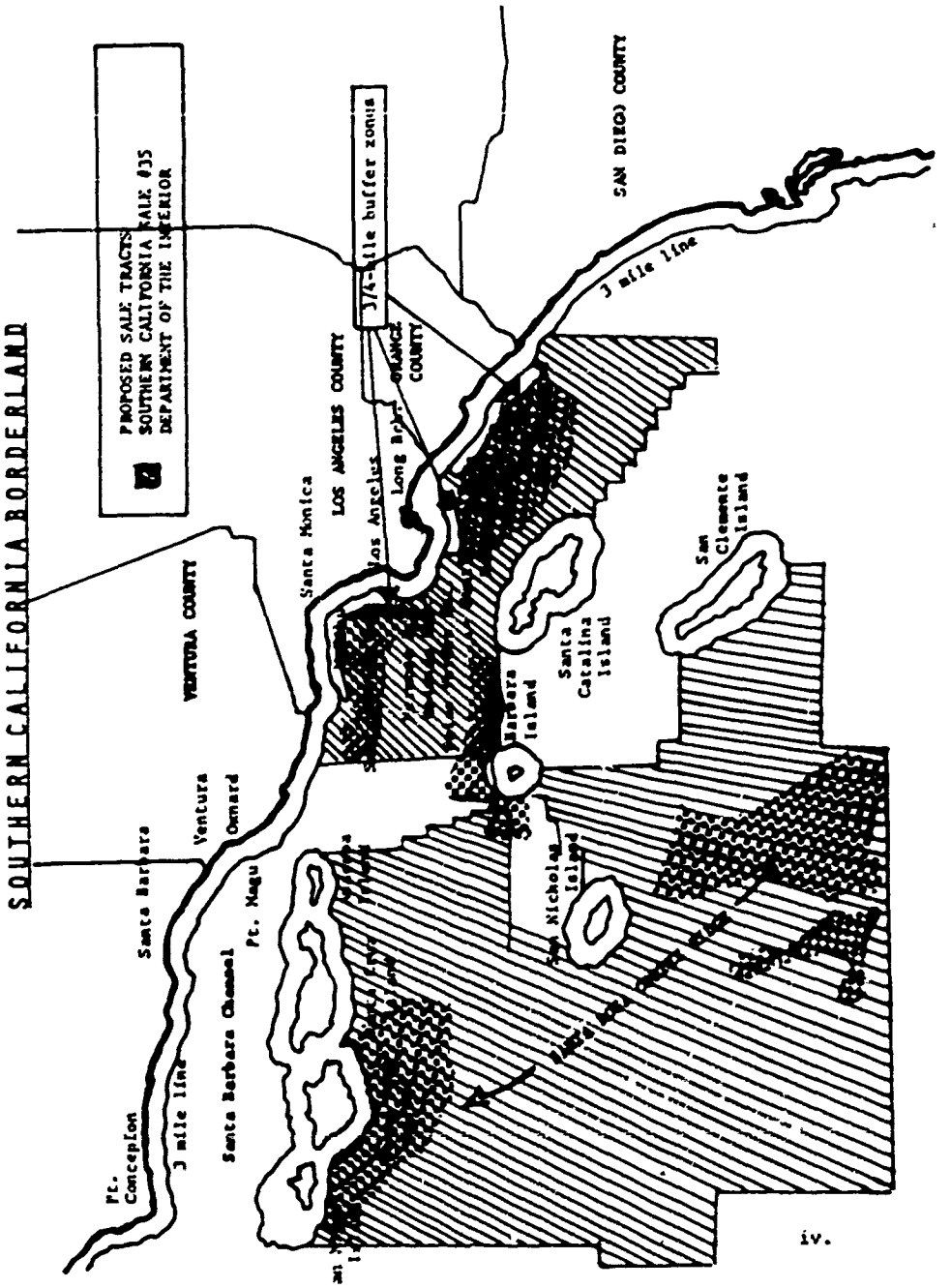
*Official Text, Published by The Bureau of National Affairs, Washington, D.C., General Policy (No. 2 August 23, 1973 (EUR) pp. B-6 and B-7. (Emphasis added.)


SOUTHERN CALIFORNIA BORDERLAND
PROPOSED SALE TRACTS
SOUTHERN CALIFORNIA SALE #35
DEPARTMENT OF THE INTERIOR
3/4-mile buffer zone
3 mile line
SAN DIEGO COUNTY
ORANGE COUNTY
LOS ANGELES COUNTY
VENTURA COUNTY
Santa Monica
Los Angeles
Long Beach
Santa Barbara
Ventura
Oxnard
Pt. Mugu
Pt. Conception
Santa Barbara Channel
Santa Catalina Island
San Clemente Island
San Nicholas Island
Santa Barbara Island
iv.

INTRODUCTION

During the winter of 1973–74 President Nixon directed the Department of the Interior, through its Bureau of Land Management (BLM), to triple its program of leasing potential oil and gas lands on the Outer Continental Shelf (OCS) from three million acres per year in 1973 and 1974 to 10 million acres per year in 1975 and 1976 as one step in meeting the present energy crisis. After the leasing of 10 million acres in 1975, the accelerated program is to be re-evaluated to determine the feasibility of leasing another 10 million acres in 1976.

The act of leasing Southern California OCS lands does not, by itself, immediately produce oil and gas to alleviate a crisis of acute product shortage such as we faced last winter. Historically, crude oil production has followed lease sales by two to six years.

Neither does leasing of Southern California OCS industry-nominated tracts by itself, in the absence of a comprehensive national energy policy, meaningfully contribute to the long-range goal of Project Independence—national energy self-sufficiency.

What, then, does an accelerated May, 1975, oil and gas lease sale of Southern California OCS lands actually accomplish?

It does four things.

First, and most significantly, it transfers full legal title to valuable oil and gas resources from public ownership to a private corporation for its exclusive exploitation, extraction, removal, sale and private profit for a minimum of five years or (if development proceeds on schedule) until the oil and gas resource has been completely pumped, sold for profit and exhausted.[1]

Second (assuming the continued use of the traditional "front money" cash bonus-plus-royalty bidding system), such a precipitate lease sale provides a large—perhaps $1 billion to $2 billion—one-time increment of revenue to the Federal Treasury to help balance the Federal budget.

Third (again assuming use of the cash bonus-plus-royalty bidding system), such a leasing program tends further to concentrate the ownership and profit of a valuable publicly owned natural resource into the hands of the very few largest integrated oil companies in the world. Offshore drilling itself is risky and expensive. Imposition of the additional requirement for "up front" money—the high cash bonus bids—effectively prevents smaller independent oil production companies from entering into the economical development and marketing of this oil and gas.

Finally, such a precipitate and ill considered leasing schedule begins anew the cycle of piecemeal, random development of yet another valuable natural resource area based on the profit priorities of the largest member corporations of a single private industry, and not upon the needs of all the people. Thus development begins:

Without sufficient prior knowledge to formulate a balanced long-term development plan;

Without full awareness of long-term economic and environmental impacts;

Without a comprehensive Environmental Impact Statement, the lack of which may violate the National Environmental Protection Act and certainly violates the spirit of the California Coastal Zone Conservation Act.

This report concludes that the proposed ill considered and unexamined accelerated sale of oil and gas leases on 1.56 million acres of Federally owned sub-

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[1] Krueger, Robert B., *Study of Outer Continental Shelf Lands of the United States*, U.S. Department of Commerce, National Technical Information Service, Springfield, Va., Oct., 1968 (Revised Nov., 1969). (Reproduced by the *Clearinghouse* for Federal Scientific & Technical Information.), p. 203 and Appendix 4–D.

A study report prepared under contract with the Public Land Law Review Commission by Nossaman, Waters, Scott, Krueger & Riordan (Attorneys—Los Angeles, Calif.), Robert B. Krueger, Project Director. This report will be referred to hereinafter as Krueger, *op. cit.*

Mr. Robert B. Krueger is a partner in the Los Angeles, Calif. law firm of Nossaman, Waters, Scott, Krueger & Riordan;

Member, (California) Governor's Advisory Commission on Ocean Resources, 1966–68;

Member, Advisory Council of the Institute of Marine Resources, University of California, 1966——;

Chairman, California Advisory Commission on Marine and Coastal Resources, 1970—;

Member, Law of the Sea Panel, American Society of International Law, 1968—;

Member, Sea Grant Review Panel, National Oceanographic and Atmospheric Agency, 1971—;

Member, Executive Committee on: Natural Resources Section, Los Angeles County Bar Association, 1961—;

Chairman, Marine Resources Liaison Committee, American Bar Association, 1967–70.

merged lands on the Southern California Borderland of the Outer Continental Shelf (OCS) should *not* proceed as presently scheduled in May, 1975.

The report reaches this conclusion through the development of the following thesis:

That the potential economic and environmental damage resulting from the scheduled May, 1975, sale of Southern California OCS oil and gas leases substantially outweighs the need to rush forward with the lease sale program, in its present form, at this time.

A. That the proposed lease sale program would result in irreparable harm to the competitive economic structure of the petroleum industry in California and the United States.

B. That irreparable harm to the environment might result from proceeding with the proposed program as presently conceived. There simply is *not* sufficient data presently available concerning environmental dangers and safeguards to authorize proceeding with the program.

C. That the postponement of the legal act of issuing the leases will not be detrimental to the immediate energy needs of California and the nation and will not unduly delay the resource development if it should subsequently be determined to be desirable and feasible to proceed with the oil and gas development of the Southern California Borderland OCS as the result of careful study.

(1) That additional exploratory and data gathering activity—which would have to be done by the oil companies *after* receipt of the lease under the proposed program—can be and should be done by or for the Federal Government in the interim, prior to granting development contracts.

(2) That alternate domestic petroleum sources will be available to meet a substantial portion of the immediate and interim petroleum needs of the West Coast.

WHAT'S THE RUSH? AND WHY SOUTHERN CALIFORNIA?

During the winter of 1973–74 President Nixon directed BLM to triple its OCS oil and gas lands leasing program from an annual three million acres to an annual 10 million acres beginning in 1975. This directive had been preceded by a similar directive in April, 1973, to triple the OCS leasing program from one million acres annually in 1973 to an annual three million acres in 1974.

What's the rush?

To seek an answer to this question, we should attempt to determine what social purposes or policy objectives are served by rushing the legal formalities of the lease sale.

(1) Does the legal formality of the accomplishment of the lease sale immediately alleviate the short-term, but possibly recurring, crisis of acute shortage of petroleum products?

(2) Does the legal formality of the accomplishment of the lease sale—in the current context—materially implement an important, sequential element of a long-range National Energy Policy?

Does the lease sale alleviate the short-term crisis of acute product shortage? No.

It is an axiom of the oil industry that if you want to produce immediate crude oil, you drill and pump from existing fields already known to contain reserves or probable reserves rather than begin extensive exploration and wildcatting programs in relatively inaccessible areas where you believe oil might be. This would include additional drilling and secondary recovery activities in existing fields, both offshore and upland (or dry land) fields. As will be indicated in a later section of this report, such additional recovery programs in existing fields are already in progress.

Historically, meaningful crude oil production has followed offshore lease sales by two to six years.

Subsequent to the 1954 and 1955 Louisiana offshore lease sale a trickle of production began in 1956; significant production in 1958; and a meaningful level of annual production was achieved in 1959–61 and maintained through 1965.[2]

The local experience of Exxon on its Santa Ynez leasehold in the Santa Barbara Channel is illustrative. The initial exploration lease was granted in 1968. Exploratory drilling activity has proceeded for six years, interrupted by a drilling moratorium after the blowout in 1969. Approval for the construction and installation of the production drilling platform was granted this month.[3]

[2] Krueger, *op. cit.*, Table 8–16, p. 523.
[3] Los Angeles Times, August 17, 1974, Part I, p. 1.

Significant production is scheduled to commence in 1977, approximately nine years after the lease sale.[4]

Testimony and exhibits presented to the Joint Committee on Public Domain by Mr. Kempton Hall, an independent consulting petroleum geologist, indicated industry development lead time for offshore production of two to six years.[5]

It is, then, obvious that the OCS oil and gas lease sale does not provide us with immediately useable petroleum products.

Does the lease sale implement an important sequential element of a long-range National Energy Policy?

No.

In the view of this Committee, the Assembly Select Committee on Coastal Zone Resources[6] and most other intelligent, responsible observers such a comprehensive National Energy Policy does *not* now exist. Therefore, any leasing, exploration or development activity would now have to be considered as random activity unrelated to a viable National Energy Policy.

The proposed May, 1975, OCS oil and gas lease sale is not necessary to achieve either of the two policy objectives considered above.

What, then, is accomplished by the proposed accelerated May, 1975, Southern California OCS oil and gas lease sale?

There seem to be only two policy objectives for which the lease sale is a necessary precondition. One is the receipt of cash bonus revenues by the Federal Treasury.

The other is more significant. It is an unstated, but nonetheless economically potent policy objective. Let us, therefore, state it explicitly here.

The only significant operative difference achieved by the lease sale is the transfer of legal title from public ownership to private corporate ownership.

The single operative distinction between the moment before and the moment after the lease sale is that after the lease sale the successful private corporate bidder has received "the exclusive right to explore for and extract," to produce, sell and profit from the oil and gas "for a period of five years and as long thereafter as oil or gas may be produced from the area in paying quantities, or drilling or well reworking operations as approved by the Secretary are conducted thereon. . ."[7] These are the attributes of ownership granted for the duration of the economic life of the oil and gas resources.

The timing of lease sales in the past "appears to have been a function of industry demand and . . . pressure for increasing revenue to meet the fiscal requirements of the Federal Government."[8] Mr. Roy Ash, Director of the Federal Office of Budget and Management has stated that raising revenue to help balance the Federal budget is a principal purpose of the currently proposed lease sales up to the 10 million acre annual target.[9]

The history of the administration of the Outer Continental Shelf Lands Act clearly indicates that geographical areas to be explored and developed have been primarily determined by the selections of the private oily industry.[10] There is no reason to doubt that this selection process has also operated to focus current attention on the Southern California Borderland OCS.

Why Southern California?

The answer to this question is a singificant part of the answer to the more inclusive question, *What's the Rush?*

The Southern California Borderland OCS is the richest untapped oil and gas resource area *available for ownership.*

"*Ownership of the oil* is an important point, *because there are few oil areas outside North America where a company can end up owning the oil it discovers,* oilmen note.[11]

Some desirable locations along the Atlantic Seaboard and in Alaska are being withheld from leasing pending the outcome of current law suits. The Gulf of

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[4] Transcript of Proceedings, Public Hearing Before the Joint Committee on Public Domain, March 19–20, 1974, "Offshore Drilling, p. 176.

[5] Transcript of Proceedings, Public Hearing Before the Joint Committee on Public Domain, October 2, 1973, pp. 58–9 and Appendix V.

[6] Summary of Findings and Recommendations (Pertaining to the Hearing on) Offshore Oil Drilling, held April 9, 1974. Report dated July 18, 1974.

[7] Krueger, *op. cit.*, pp. 89 & 203 and Appendix 4–D; The Outer Continental Shelf Lands Act, 67 Stat. 462, 43 U.S.C. §§ 1331–1343 (Aug. 7, 1953).

[8] Krueger, *op. cit.*, p. 610.

[9] Los Angeles Times, June 27, 1974, Part I, p. 1.

[10] Krueger, *op. cit.*, pp. 187 & 602–04.

[11] Bureau of National Affairs, Washington, D.C., General Policy (No. 50), July 25, 1974 (EUR) p. A–29 (Emphasis added).

Mexico has "been largely leased up," according to Deputy Under Secretary of the Interior, Jared G. Carter.[12] This means that future development will have to take place in the "frontier areas," specifically Southern California, Carter indicated, where large-scale offshore drilling (on Federal lands) has not been done before.

The Southern California Borderland OCS is "ripe."

The major oil companies are ready to proceed. Recent record profits provide them with huge sums of cash to invest in the "front money" cash bonus bids.[13] They are prepared to mesh Southern California OCS oil and gas into their plans for exploiting Alaskan oil.

There is no comparably attractive domestic area available for exploitation. The bureaucratic procedures for granting ownership of the oil and gas resources are favorable. The economic environment—peculiar to California—of tight oligopolistic control of production, pipelines, refining and marketing[14] is most receptive to oligopolistic development of the OCS resources.

In 1972 individual and corporate members of the petroleum industry contributed approximately $5 million to the Finance Committee to Re-Elect the President (F-CRP); some secret and some publicly acknowledged contributions; some legal and some illegal contributions. The Hon. Les Aspin, Member of the U.S. House of Representatives from Wisconsin, has provided a significant public service in gathering this information from the public record, from the General Accounting Office and from the research of Common Cause and publishing it in the Congressional Record.[15]

It would be naive in the extreme to assume that the petroleum industry invested $5 million in CRP with no anticipation of any return whatsoever.

The persuasive and all pervasive influence of the major international oil companies in the highest councils of government can be additionally illustrated through the following two events.

In 1969 Occidental Petroleum Corporation had proposed the construction of a sizeable (approximately 300,000 barrels per day) refinery in Maine. Occidental intended to process its inexpensive Libyan crude oil in this refinery. This would have required the removal of the then existing oil import quotas which kept a protective wall around the U.S. market between 1959 and early 1973. As part of a general consideration for the removal of the oil import quotas, a Cabinet-level task force in 1969 was readying a proposal to dump the quotas.

"Exxon can be faulted for its support of oil import quotas, . . . Michael Haider, then Exxon's recently retired chairman, arranged a private meeting with President Nixon, who eventually decided to keep the quotas. In retrospect, that was a grievous error. The quotas helped prompt U.S. oil companies to build their new refineries overseas, where they had access to their plentiful and cheap foreign crude. U.S. refineries have about 3 million to 4 million bbl. less daily capacity than they would need to meet 'normal' domestic demand of close to 20 million bbl. That lack will contribute to keeping supplies tight for years. . . ." [16]

The second event is a more recent occurrence involving the obstruction by major oil companies of the collection of data in Venezuela for a Federal Energy Administration (FEA) study to consider different possible government policies toward U.S. firms active in the international oil busines. Two investigators[17] conducting interviews in Venezuela for the study were told by the U.S. Ambassador to cease the interviews and to leave Venezuela as soon as possible on the request of the State Department. Mr. Dolph, the head of Creole Petroleum (an Exxon subsidiary) and Mr. Rawleigh Warner, Chairman of Mobil, objected to the study and complained to the U.S. Embassy. The two investigators returned to the United States without having seen any of the Venezuelan officials they had planned to meet.[18]

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[12] Los Angeles Times, July 13, 1974, Part II, p. 1.

[13] See subsequent section of this report, *What Are They Doing to Us—Economic Considerations*, p. 13, for a discussion of the detrimental economic consequences of this traditional BLM bidding procedure.

[14] For details see concurrent reports issued by the Joint Committee on Public Domain covering Pipelines and Exchange Agreements.

[15] See Congressional Record—Extension of Remarks: January 22, 1974, pp. E87 and E88; January 23, 1974, pp. E141 and E142; January 24, 1974, pp. E175 and E176.

[16] Time, February 18, 1974, p. 82.

[17] One of the investigators who was asked to leave Venezuela was the Contractor's Project Director for the FEA study, Mr. Robert B. Krueger, identified in Note 1, above, of this Joint Committee report. The Contractor for the FEA study is the Los Angeles law firm of Nossaman, Waters, Scott, Krueger and Riordan, Los Angeles Times, Aug. 17, 1974, Part I, p. 18. See also Appendix I for a summary draft statement of the objectives of the study.

[18] Los Angeles Times, August 17, 1974, Part I, p. 18.

The petroleum industry has indicated a demand—a willingness to buy. The revenues to be received would certainly help to balance the Federal Budget. Out of a potential total of 7.7 million acres in the Southern California Borderland OCS, the industry has selected or "nominated" 1.56 million acres to be offered for initial sale.

In summary, the directives to triple and then triple again the acreage put up for lease sale seem to be the ad hoc reaction of an indebted Administration to a "crisis" situation. The program of increased lease sale offerings is an easy solution. It follows an habitual way of doing business requiring no critical thinking by the acquiescent bureaucracy. The bureaucracy is geared up to handle it—the same bureaucracy which so persistently assumes that "what's good for Standard Oil is good for the nation."

"Our mission is to serve you, not to regulate you. . . . We have to do business today and tomorrow."—(Rogers C. B. Morton, Secretary of the Interior, White House Briefing of Oil Industry Leaders, August 16, 1973)[19]

There is only one reasonably inferrable answer to the question *"What's the Rush?"* An accommodating Federal administration is pushing to transfer immediately the ownership of valuable publicly owned oil and gas resources to the largest private corporations in the world before an informed and aroused public can demand alternate considerations and before Congress can determine an energy policy, establish priorities and consider beneficial economic changes in offshore oil development procedures.

WHAT ARE THE STAKES?

The stakes in the controversy over the leasing and development of the Southern California OCS are enormous in terms of both economic and ecological significance.

Economic

All of the citizens of the United States now own one of the potentially most significant remaining untapped oil and gas prospecting areas in the world. The Outer Continental Shelf from Point Conception to the Mexican Border—including the Santa Barbara Channel and the so-called Southern California Borderland, approximately 21,000 square miles—contains an estimated 89 billion barrels of undiscovered "oil in place" and an estimated 890 trillion cubic feet of undiscovered "gas in place." The two geographic components of this total are: 14 billion barrels of oil (and 140 trillion cubic feet of gas) in the Santa Barbara Channel and 75 billion barrels (and 750 trillion cubic feet of gas) in the remainder of the Southern California OCS area.

These estimates of "oil in place" presented to the Committee by an experienced, independent petroleum geologist are admittely sketchy.[20] They are based on the merest beginnings of geological and geophysical exploration work on the OCS, and on comparisons with similar known oil bearing and producing geologic structures already developed on dry land. Nonetheless, these estimates are the result of reputable study and are the currently accepted working estimates of the industry, having been officially published by the American Association of Petroleum Geologists in 1971, under a grant from the National Petroleum Council of Washington, D.C.

According to the working hypothesis of the professional geologists, approximately 30% of this "oil in place" might be discovered and pumped out using economically and technologically feasible discovery and recovery methods. This would result in approximately 22½ billion barrels produced from the Southern California Borderland and 4⅘ billion barrels from the Santa Barbara Channel; a total of 26⅘ billion barrels. At current rates of consumption for California alone (approximately 2 million barrels per day), this could provide 38 years worth of petroleum products for California.

Ecological

There are other values to which we must also pay heed—values inherent in the seas above the submerged lands, on the tidelands, the marshlands and at the shoreline. These are values not so easily given an immediate measure by the dollar sign.

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[19] Official Text, White House Briefing, Bureau of National Affairs, Washington, D.C., General Policy (No. 2) 8-23-73 (EUR) pp. B-6 & B-7.

[20] Kempton B. Hall, Independent Consulting Petroleum Geologist, Transcript of Proceedings, Public Hearing Before the Joint Committee on Public Domain, October 2, 1973, p. 50 et seq and Appendixes III, IV and V.

"Like the sea itself, the shore fascinates us who return to it, the place of our dim ancestral beginnings. . . .

"When we go down to the low-tide line, we enter a world that is as old as the earth itself—the primeval meeting place of the elements of earth and water, a place of compromise and conflict and eternal change. For us as living creatures it has special meaning as an area in or near which some entity that could be distinguished as Life first drifted in shallow waters—reproducing, evolving, yielding that endlessly varied stream of living things that has surged through time and space to occupy the earth." [21]

The shoreline itself, as well as the oil and gas resources underlying the submerged lands, is a heritage belonging to all of the people of the United States. Californians have a special responsibility as trustees for ourselves, our children and for all other people in the country to preserve and protect the lifegiving seashore.

The valuable petroleum resource under the OCS probably will not remain completely undeveloped.

But the important questions are:

Who has the rights to ownership, use and the economic benefits of this resource?

Who has the rights to control the orderly and ecologically sound development of this valuable natural resource?

These questions, clearly, are too important to leave to the bureaucratic professionals and the major oil companies.

The question is, simply: Who is to decide? Them or us? [22]

WHAT ARE THEY DOING TO US?

Economic considerations

The most significant and detrimental long-term economic effect of the proposed "rush" program of OCS lease sales under the traditional leasing procedures would be the almost inevitable increase in the concentration of control over our valuable publicly owned natural resources in the hands of the very few largest integrated oil companies in the world.

The Bureau of Land Management (BLM) of the Department of the Interior conducts the actual sale of the oil and gas leaseholds. The regular procedures call for competitive sealed bids to be submitted to BLM on a tract-by-tract basis. Each tract is then awarded to the qualified bidder who submitts the highest "front money" cash bonus bid.

The capital requirements needed to develop the tract within the first five-year lease period are immense—approximately $1 million per drill hole; $10–$50 million per drilling platform; millions for service boats and equipment, etc. The requirement for an initial "entry fee" cash bonus bid on top of this large actual working investment, simply to acquire the leasehold, effectively acts to prevent all but the largest companies or joint venture combines from participating in the offshore exploration game. No one speaking to the Committee on this point disagreed with this conclusion.

Some examples of total cash bonuses on prior lease sales are as follows:

June 1967: Louisiana—$510 million received.

February 1968: California—$1.3 billion bid; $603 million received.

June 1968: Texas—$1.6 billion bid; $600 million received.

September 1969: Alaska—Approximately $900 million cash bonus received.

The California (Santa Barbara Channel) lease sale on Federal OCS land in February 1968 is pertinent and indicative of what we might expect from the proposed 1975 lease sale.[23]

Total bids were 1.3 billion. Total cash bonuses received were $602.7 million. A single company, Exxon (the largest oil company in the world, then as now; currently replacing General Motors in June, 1974, as *the* largest industrial corporation in the world), bid $250 million in its single name for 19 tracts. Of these it was awarded 18 tracts for $195 million. In addition, Exxon joined Standard Oil of California and ARCO in two separate joint venture bids totalling $192 million for 48 tracts, winning 29 tracts for $53 million actual cash paid by the groups. ARCO and SoCal bid without Exxon and won an additional 2 tracts. Thus, the largest, the 6th largest and the 14th largest (1973 figures) oil companies in the world won 49 of the 71 tracts sold, or 69% of the sale.

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[21] Carson, Rachel, *The Rocky Coast*, The McCall Publishing Co., New York, 1971, Preface, p. ix.

[22] See Appendix IV.

[23] All information taken from Krueger, *op. cit.*, pp. 503–10 and Table 8–13.

The next combination of bidders, composed of Union, Mobil, Gulf and Texaco, bid $380 million, winning 17 tracts for total bonuses paid of $237 million. Their successful bidding included the largest single bonus bid (to that time) ever received for a single 5,400 acre tract—$61,418,000.

Exxon, in a single bid, won one tract for $27 million; the second highest bid for this tract was $3 million. Thus, any independent producer, or combination of same, would have had to put up $61.5 million in one instance and over $27 million in another just to overcome the high Union/Mobil/Gulf/Texaco bid or the single Exxon bid. These are very steep entry fees just to buy the right to sink a drill bit into the ocean floor.

These seven largest companies thus won 66 of the 71 tracts or 93% of the tracts offered.

There was a single bidder—Shell—and three other groups. One group of larger companies received no awards; one group of moderately large companies received 2 tracts; the Pauley Petroleum group of smaller companies received 2 tracts and Shell took one.

"There are two points to be made from the foregoing analysis relative to the effectiveness of the competition. First, instead of 27 independent bidding units there are, in fact, (only) six.

"They consist of one single-bidder firm, Shell Oil Company, plus five combines. These five combines are composed of various groupings of 24 firms.

"Second, four of the five combines are made up of 15 of the big 20 oil companies is Marathon Oil Company [with 1973 sales of $1.578 million, total assets of $1 572 million, and net income of $143 million. The first combine, involving Exxon, SoCal and ARCO . . . have total assets of $25.1 billion, $9.1 billion and $5.1 billion, respectively] . . .

"The Pauley combine is composed of firms that, probably with the exception of Ashland Oil and Refining Company, could not separately compete effectively for the most promising oil and gas leases. By combining their resources, the Pauley group was able to obtain two tracts at a total cost of $74 million. Thus, the practice of joint bidding among small firms resulted in the addition of one effective competitor." [24]

The 1968 Santa Barbara Channel experience can be taken as very indicative of the probable 1975 Southern California expectation.

The author of the above study states that effective competition and entry of smaller producing units seems less in California than in Texas and Louisiana.

One additional reason for the lesser degree of competitive entry for smaller companies in California is the smaller number and relative weakness of independent producers and refiners on the West Coast as compared to the Gulf Coast. This situation has been created and maintained by the major California oil companies which own over 95% of the crude oil pipeline network in California; own 85% of the refining capacity; and control the low posted price schedule, all of which have prevented the independent producers from making a fair return on their investments. And indeed have prevented them from producing at all where actual costs have exceeded the allowable posted prices. Being kept in such an anemic condition, it is small wonder that they are unable to put big chips on the table to buy the right to explore for oil on public lands!!

The practices of the major California oil companies in pricing, pipelines and refineries have been or will be examined in detail in other reports of this Committee and will not be repeated here.

In the final analysis the true economic function of the "front money" bonus bidding system is to perpetuate and extend the oligopolistic control by the giant oil companies over the OCS oil resources. The functional consequences of this system is to eliminate effective competition by denying smaller production units access to the development of OCS oil resources.

Whatever one might believe about the antitrust implications of the present economic organization of the international oil industry, certainly it can be agreed that the United States Government should not—either through explicit complicity or inadvertent behavior—contribute to the extension of such a tight oligopoly.

PROCEDURAL CONSIDERATIONS

"I know we've got a credibility problem," said Jared G. Carter, Deputy Undersecretary of Interior, discussing the OCS oil exploration program at a public meeting in the Santa Monica Civil Auditorium in early July.

[24] Krueger, *op. cit.*, pp. 508-09.

Perhaps more than Carter realized, his comment seems to sum up the apprehension of Californians concerning the potential environmental dangers of the proposed OCS oil exploration program. The program is being presented step-by-step with each step a *fait accompli* with no provision for effective public comment or substantive participation in the planning process.

Except for the PR-type presentations made by Mr. Carter during his July visit to California, some contacts with the State Lands Commission and some questionnaires sent through the mail, no substantive contacts have been made to the appropriate boards, commissions, councils or agencies of state and local government by BLM.

The Joint Committee on Public Domain had hoped to have a representative of the Federal Government contribute to the March Committee Hearings on offshore exploration. No such representative appeared. One witness at the hearing, a consultant to the California Conservation Committee of Oil Producers, suggested that, "A solution will be found if the environmentalists will sit down with the oil industry and conscientiously work with them in arriving at a mutually satisfactory solution."[25] No such opportunity has been offered.

No effective BLM contact has been made with the California Coastal Zone Conservation Commission.

Mr. H. W. Wright, Secretary of the Public Lands and the Offshore Operations Committee, Western Oil and Gas Association, stated to the Joint Committee on Public Domain, "Nor does there seem to be any necessity for further legislation to protect the environment. The California Environmental Quality Act and The California Coastal Zone Conservation Act of 1972 appear to provide more than complete protection."[26]

Unfortunately, the oil industry and the government agencies with which it operates do not seem to be making a conscientious effort to work cooperatively with the California Coastal Zone Conservation Commission. Quite the contrary, they seem intent on forcing the sale of oil and gas leases on Southern California OCS land *before* the completion of the comprehensive coastal development plan required by the California Coastal Zone Conservation Act of 1972—the very act that Mr. Wright purports to believe adequate to coastal protection.

The Bureau of Land Management (BLM), the U.S. Geological Survey (USGS) and the State Lands Commission (SLC) are proceeding according to their habitual mode of operating with the oil industry. It is a classic example of the regulating agencies being increasingly influenced by the industry they are supposed to be regulating. "Our (Department of the Interior) mission is to serve you, not to regulate you. We try to avoid it." (Rogers C. B. Morton, Secretary of the Interior, Remarks to oil industry executives)[27]

In a report on *The Administration of State Owned Tidelands* issued on August 15, 1974, by the Joint Committee on Public Domain, the Committee has detailed the failure of the State Lands Commission to operate effectively in the public interest in a number of matters directly affecting the oil industry.

BLM and SLC continue to operate under the mistaken notion that "What's good for Standard Oil is good for the nation and for California." They have mis-identified their proper role by assuming that the interests of the government agencies are identical to those of the giant oil companies. This is simply not true. The oil companies are developers, purchasers, and processors of crude oil. The proper role of the government agencies is that of independent resource owner and seller of crude oil—an across-the-table, adversary relationship with the oil companies. The City of Long Beach, as Trustee for the State in the operation of the Wilmington tidelands oil field, has correctly identified its role vis a vis the giant oil companies. Long Beach has joined the Independent Producers Association. BLM and SLC have not yet awakened to their true responsibility.

In a subsequent section of this report entitled *Caveat Venditor* (Let the seller beware) we have outlined the proper responsibility of our government agencies.

This misapprehension of their true responsibilities has led BLM and SLC to a misunderstanding of the purpose and function of an Environmental Impact Statement (EIS) in the planning process. They are viewing the Environmental Impact Statement as just an accretion on existing procedures; just an additional formality—another step to go through after the substantive plans have been made.

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[25] Transcript of Proceedings, Public Hearing Before the Joint Committee on Public Domain, March 19-20, 1974, "Offshore Drilling," pp. 6-7.
[26] *Ibid.*, p. 42-8.
[27] See Note 19, above.

They do not seem aware of a new mood amongst the U.S. public that the EIS is an integral part of the total planning process—all of which must take place in good faith and in full public view.

Public agencies of other nations are apparently able to conduct a more open public planning dialogue with the major oil companies.

"A . . . strength of the North Sea systems with regard to public confidence is that they provide government with virtually all available information, even during the earliest phases of data collection. This responds to a consistent criticism, whether warranted or not, that, under the present U.S. system, government possesses inadequate information to make well-informed decisions. This seems to be a product both of the U.S. leasing system and the petroleum industry's general distrust of government. In fact, if the public is to have confidence in the management or interest in continental margin development, it would appear that there must be greater mutual trust between industry and government. This trust appears to exist in the North Sea countries and government-industry relations there are generally marked by cooperation and candor. Everyone benefits. By sharing more information and discussing future plans, for example, both government and industry planning is better informed and an understanding of what is acceptable and unacceptable worked out informally. This guards against surprises and hipshooting responses." [1]

More openness and more candor on the part of the oil industry and the government agencies now dealing with it would go a long way toward eliminating Mr. Jared Carter's "credibility problem."

Here are two additional examples of totally unacceptable government agency behavior in the protection of the public interest.

First, there is no assurance that adequate independent advice is being solicited or received in the preparation of standards for antipollution equipment. Indeed, there is evidence to the contrary. A U.S. Geological Survey document marked "privileged information" indicates that the government has enlisted over 20 oil company executives to draft the standards for such antipollution equipment used in offshore drilling. This prompted one observer to comment that, "This is a little like putting Dracula in charge of the blood bank."

Second, BLM has established a ¾ mile buffer zone in Federal waters adjacent to State designated sanctuaries in which no drilling will take place. This is ostensibly to prevent oil drainage from State lands through wells drilled through Federal leaseholds. By law, if such drainage occurs from State sanctuaries (which presently exist along the Malibu-Santa Monica Bay, Long Beach, and Huntington Beach-Laguna Beach State owned tidelands), then drilling must be allowed in these sanctuaries to recapture the economic return to the State of California. This, of course, would completely destroy these sanctuaries.

Undersecretary of Interior Jared G. Carter has stated that, "For drainage purposes, a ⅔ mile zone is larger than needed," but that the department wants to be extra cautious.[2] No evidence was given to substantiate the claim that a ¾ mile buffer zone is sufficient. Indeed, one might ask, if a ¾ mile zone is more than sufficient, why, then was a 2 mile buffer zone established in the Santa Barbara Channel prior to the 1968 Federal leasing there?

A conversation with Mr. E. N. Gladdish, Executive Director of the State Lands Division, indicated that the ¾ mile buffer zone was more or less arbitrarily selected by the Interior Department and accepted by the State Lands Commission.

The kicker, however, is that the width of the buffer zone really doesn't seem to matter because SLC and BLM are entering into a "unitizing" arrangement whereby certain oil pumped up through Federal leaseholds will be assumed to be coming from oil reservoirs overlapping both Federal and State land. The State will thus share in the revenues and presumably will not actually be forced to drill within the State sanctuaries.

This all looks very fine until one realizes that this cozy arrangement is being worked out solely on an administrative basis between the two agencies without benefit of any public discussion; with no public consideration of the possible effects of ocean bottom subsidence as a result of drainage under State sanctuaries—a significantly important consideration off Pacific Palisades; and completely in violation of the spirit and purpose of the Offshore State Sanctuaries!

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[1] White, Irvin L., et al, *North Sea Oil and Gas*, University of Oklahoma Press, Norman, Oklahoma, 1973, pp. 183–4.

[2] *Oil and Gas Journal*, July 22, 1974, p. 17.

Environmental considerations

The Joint Committee on Public Domain hearings on offshore drilling provided testimony on a number of matters of environmental concern. The testimony indicated that progress had been made in certain aspects of the offshore drilling safety and antipollution procedures, and that numerous problems still remain.

A. Progress

1. In evaluating methods and procedures for the prevention of future blowouts and oil spills, it is always helpful to have an analysis of what went wrong on a prior disastrous occasion. The Committee received an informed opinion concerning the cause of the blowout on Platform "A" in the Santa Barbara Channel in 1969.

There were inadequate Federal regulations regarding the requirements for drill hole casing. There was apparently inadequate supervision of the drilling operations. There were thus two errors made in the drilling operations: (a) insufficient depth of casing around the drill hole (238 ft. for a 3,200 ft. hole) and (b) insufficient weight of drilling mud at the bottom hole reservoir to contain the pressure from a pressure zone within the reservoir. Thus the pressure escaped from the deep reservoir up 3,000 ft. of uncased drill hole whence it then leaked through fissures in the drill hole rock into a shallow reservoir, about 500 feet below the ocean floor, and then seeped to the surface from there.[30]

Knowing that this accident occurred as a result of correctable error provides a certain degree of assurance for future operations.

2. Operating under revised regulations with much more stringent requirements for casing, Exxon has achieved an excellent safety record on its exploratory drilling program since 1969 in the Santa Ynez field.

Utilizing casing all the way down the drill hole. Exxon has drilled 44 wells with a total of approximately 400,000 feet of hole drilled. They drilled in water depths up to 1,500 feet and operated 3,000 rig days. In the entire five year period there was only a single four-barrel spill.[31] The statement was made that since these operations *have been* conducted safely in the past, they *can be* done equally safely in the future.

3. New regulations and new safety features on drilling platforms, such as "fail-safe" automatic shut-off valves have improved the anti-spill characteristics of the drilling operations. Pumps will shut off and drill pipes, pipelines and storage tanks will shut down in case of accident, earthquake, storm damage, etc. On-platform response capabilities have been provided for the immediate containment and recovery of any possible spill.

4. Improvements have been made in the containment boom systems for containing and skimming oil spills. The bottom-tension boom has a skirt which remains approximately eight feet under water as the boom is pulled through the water by a tension cable attached to the bottom of the skirt. Thus no surface oil can escape out from under the boom and skirt.

Clean Seas, Inc. is one of four companies organized to operate the containment and oil spill recovery systems throughout the length of the California coast. Clean Seas, Inc. has successfully tested the bottom-tension boom system on natural seepage in eight foot seas. Clean Seas, Inc. claims a maximum response time of four hours to any oil spill within its jurisdiction: Morro Bay to Pt. Dume.

B. Problems

For all the progress, there remains substantial unkowns and continuing problems in providing pollution-free drilling activities.

1. The piecemeal, incremental development pattern followed by BLM provides for Environmental Impact Statements only for the specific tracts being leased at any one time. It prevents the precise approach which should be utilized: A total, long-range systems design plan for the entire 7.7 million acres potentially available for lease now and in the future. Such a comprehensive plan and its accompanying EIS is an absolutely necessity before sensible decisions can be made on either an economic or an environmental basis. Such a comprehensive plan is required to make optimum decisions regarding:

(*a*) Potential earthquake risk;

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[30] Transcript of Proceedings, Public Hearing Before the Joint Committee on Public Domain, March 19–20, "Offshore Drilling," pp. 177–79.

[31] *Ibid.*, pp. 161–62.

(*b*) Desirability of pipelines-to-shore vs. offshore tanker loading transportation systems;
(*c*) Desirability of unitizing operations;
(*d*) Number and placement of platforms;
(*e*) Number and placement of ocean bottom production units;
(*f*) Number, size and routing of ocean bottom pipelines to onshore facilities; and
(*g*) Number, location, capacity of onshore processing facilities and the economic and environmental impacts of same.

Without the initial availability of a one-, five-, and 10-year planning framework, we will be repeatedly faced with the "urgent necessity" to approve construction of this facility or utilization of that process to support some activity for which we had given prior approval on a random basis.

2. The four-hour reaction time of Clean Seas, Inc. from the Santa Barbara harbor is not sufficient. Containment and cleanup must be immediate. Some of the most lethal and ecological effects result from the readily soluble and very toxic aromatic portions of crude petroleum.

3. There is not enough good research information available on the long-term effects of these soluble toxic substances and not enough data on the long-term effects of crude oil deposits on beaches.

4. Prevention of spills is the best method. Some of the fail-safe equipment on the drilling platforms looks very good. However, there is no comparable information available on the technology presently available to prevent submerged pipeline rupture during an earthquake, for example, or on the safety of the completely self-contained ocean bottom production units.

5. There is insufficient experience with floating booms and vacuum devices—the containment/skimmer systems—used to clean the oil slick off the surface of the ocean. There have been no satisfactory tests in any situation beyond eight foot waves and a 20 knot wind. Indeed, testimony was presented of the inability to clean up a recent oil spill off Monterey in choppy seas. The effects of heavy currents also deserve much further study.

6. There has been no assurance received that ocean bottom completion and production equipment (although apparently technologically feasible) will be required to reduce the visual pollution of above-the-surface drilling platforms.

HOW SHALL WE PROCEED?

In a phrase: With all deliberate caution.

Caveat venditor

All of the citizens of the United States are now the owners and potential sellers of a valuable natural resource—the Southern California OCS oil lands. We are dealing with a relatively small number of extremely large and economically powerful buyers. In this instance we should do a turnabout on that ancient and venerable maxim of every introductory economics course—*Caveat Emptor* (let the buyer beware). In our dealings with the giant oil companies we should observe the converse of this maxim—*Cavett Venditor* (let the seller beware). We should not confuse our economic or environmental interests with those interests of the giant oil companies—as the government agencies so readily do.

It should be noted in passing that our cautious behavior as sellers in this instance will go a long way toward setting the competitive conditions and economic structure of the industry which plans to resell our own natural resource back to us as finished, refined petroleum products. Our care as sellers will help to assure us of effective, competitive prices as we function in our roles as buyers of gasoline.

Interior Department responsibility in public land management

The Department of the Interior is charged with the responsibility of managing the public lands of the United States for the maximum benefit of the general public. The Act establishing the Public Land Law Review Commission states:

"It is hereby declared to be the policy of Congress that the public lands of the United States shall be (a) retained and managed or (b) disposed of, all in a manner to provide the maximum benefit for the general public." [43]

Public policy has long acknowledged the necessity for multiple use of public resources. An Act for the classification of public lands, passed at the same time

[43] 43 U.S.C. § 1391 (1964).

as the act creating the Public Land Law Review Commission, defined multiple use as follows:

"The management of the various surface and subsurface resources so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . and the harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, *with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.*" [33]

This clearly allows for the consideration of that combination of uses providing both optimum economic and optimum environmental benefits.

Under present operating policies, it is almost impossible for these two objectives to be realized.

This is true because the Bureau of Land Management, Department of the Interior, has inadequate information concerning the characteristics of the tracts put up for leasing to discharge its land management function satisfactorily.

Inadequate government data collection procedures

Under existing procedures, private corporations are granted licenses and permits for geological surveys and geophysical surveys well in advance of the lease sales. The United States Geological Survey (USGS) of the Department of Interior does practically no independent survey work. Almost all of such work is done by the private corporations, although there may be a USGS agent present at the time data is collected. The USGS does not do any independent data evaluation and does not require submission of raw geophysical data (geological data is submitted) nor is any interpretive or evaluative information required. All of the information and interpretive conclusions gathered by the prospective bidders is considered proprietary information and is therefore not divulged either to competitors or to the Federal government—our agents for the sale of our resources.

Krueger's *Study of the Outer Continental Shelf Lands of the United States* has this comment:

"Both the federal government and industry have had less than complete information regarding the extent of the resources at the time of the sale . . .

"It clearly appears to be less than efficient resource management for the Secretary of the Interior not to obtain geological and geophysical information that could be required from permittees and lessees which would enable USGS and consequently BLM to adequately evaluate proposed lease areas and any bids received therefor . . . In view of the extremely high cost of proving the existence and extent of an oil and gas resource with existing technology, *it would not appear to be feasible* for either the federal government or industry *to have complete knowledge* of the resource at the time of lease sales. *It would be feasible and desirable, however, to have a partially knowledgeable buyer and an equally informed seller.*" [34]

This is the single most repeated recommendation throughout Krueger's study.

This lack of information available to USGS and BLM has a number of injurious environmental and economic consequences. Conversely, a program which would provide this information would produce a number of benefits.

Pre-lease sale data collection by government agencies is required

The lease sale of Southern California OCS land should be postponed until an extensive survey program is done by or for USGS to provide significant additional information upon which to base an effective leasing and development program.

This survey program can be done by the USGS or the regulations can be amended to require submission of data by the prospective bidders prior to the awarding of the production leases.

An exploration program by the USGS prior to the lease sale would *not* unduly delay the ultimate development of the OCS oil and gas resources if it were subsequently determined that such development should proceed under national energy and environmental policies.

As we saw in an earlier section of this report, the companies themselves now take two to six years after acquisition of a lease to perform this exploratory work. This work could proceed just as effectively before the granting of a final production lease.

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[33] 43 U.S.C. § 1415(b) (1964). Emphasis added.
[34] Krueger, *op. cit.*, pp. 604–05.

Industry objections to government data collection

The private oil and gas industry opposes both exploratory work by the USGS and divulging information to the Federal government.

"Generally the oil and gas industry does not object to the present system of tract selection . . .

"Representatives of major oil companies are opposed to any exploration activities by the federal government of the type now conducted by industry. The apprehension has been stated that such activities would permit the federal government to *direct* the course of mineral development on the Outer Continental Shelf." [33]

This objection by industry is invalid on its face. The Department of the Interior has the legal responsibility to manage or dispose of the public lands, "all in the manner to provide the maximum benefit for the general public." Clearly this would encompass directing the course of mineral development on the Outer Continental Shelf.

Recently the Department of the Interior proposed changes in the regulations to require disclosure of offshore exploration data. These changes were met with massive resistance from industry. It was claimed that such required disclosure would (1) be a confiscation of proprietary rights to confidential data; (2) exceed the limits of the Outer Continental Shelf Lands Act; and (3) choke off technological innovation by the private sector.

Considering these objections:

First, this information is gathered from public lands under permits issued by a public agency. There is ample precedent from the field of Defense Department contracting to provide for data acquisition by the Federal government. Also, in almost every other instance of mineral exploration except petroleum, a prospector working under an exploration permit must "prove up" the claimed prospect. That is, he must supply definitive data prior to the award of a production license or lease. Oil is the only mineral with which the government "plays blind." Certainly these related mineral development procedures can also be applied to oil prospecting and leasing. In any event, competitive confidentiality is a specious argument in the light of the widespread joint venture practice in the industry. These same giant companies who do not want this data disclosed to their "competitors" share this information with their joint venture partners prior to bidding anyway.

Beyond this exchange of geological data among the joint venture partners in the pre-bidding phase, there is another aspect of joint venture negotiations which further limits competition. The joint venture partners have a prior understanding that limits their possible competition with one another. If, in the course of the discussions, they are *not* able to reach a consensus for a single bid amount on a given tract, then the partner with the originally suggested high bid is free to bid alone for this tract. And the other partners have agreed not to enter a higher bid for this tract in competition with the initial high-bid partner.[34]

Second, the Outer Continental Shelf Lands Act can and should be amended if such is determined to be in the public interest.

Third, this argument does not necessarily stand up in the face of recent North Sea exploration and leasing experience. These companies—the same companies which are now protesting the requirement to divulge data to the United States government—have been providing this same type of data to the governments of Norway, the United Kingdom and Denmark as a routine condition of their exploration, development and production contracts and licenses.[35] Far from choking off technological innovation, significant advances have been made in the North Sea in at least two instances: (1) the utilization of reinforced concrete structures for offshore platforms and storage tanks and (2) the development of the turbodrill for directional drilling of the deviated portion of the hole.[36]

Thus we see that the collection of data by the USGS prior to final lease or license need *not* delay a comprehensive development plan; can be and should be done in the interest of greater public benefit; and already is being provided

[33] Krueger, *op. cit.*, p. 609. Emphasis added.

[34] Deposition of *Otto Miller* (Chairman, Standard Oil Co. of California) January 4, 1974, pp. 38–50. In the Superior Court of the State of California in and for the County of Sacramento. In the Matter of the Petition of the Subcommittee on Crude Oil Pricing of the Joint Committee on Public Domain of the California Legislature (Petitioner), To Compel the Production of Books and Records by Harold Severance, Winfred O. Plant, and Donald Marshall, (Respondents), No. 241,392.

[35] See Appendix II for a description of information required by the North Sea countries during the non-drilling exploration stage. White, Irvin L., *op. cit.*, pp. 58–9, Table 5

[36] White, Irvin L., et al, *op. cit.*, p. 64.

to other governments by the same companies which so arrogantly protest granting this information to our government.

Inadequate data results in inadequate environmental impact statements

The lack of this information clearly prevents the preparation of an adequate Environmental Impact Statement as required by the National Environmental Protection Act. Without adequate seismic data and coring samples, adequate definition of reservoirs is not possible. This leads to inadequate findings and under-estimation of requirements for platforms, pipelines, onshore facilities, etc. This could also result in the pumping of oil from reservoirs subsequently determined to lie under State sanctuaries, thus violating these sanctuaries.

Such an inadequate EIS actually occurred in the 1968 Santa Barbara Channel lease sale. The Santa Ynez field was stated to be a single field. Subsequent exploration revealed three separate fields in these geologic structures.

Inadequate data results in dominance of major oil companies in OCS activity

The lack of adequate pre-lease sale data also directly contributes to the economically disadvantageous situation wherein the giant oil companies dominate the bidding and tract awards. It puts a premium on the gathering and interpreting of exploratory data which many of the smaller companies can ill afford. This allows the large companies successfully to out-bid the smaller ones.

Government collection and publication of this data would allow completely different bidding procedures to be utilized.

With the availability of such data, the present bidding system of "front money" cash bonus-plus-royalty could be and should be eliminated. In turn, the elimination of cash bonus bidding would itself do away with the "competitive necessity" that such information be kept confidential in the first place.

The availability of adequate data would also allow for the creation of an overall, long-range development program consistent with optimum economic and environmental needs.

Adequate pre-lease data would allow profit participation contracting

Within such a long-range development program based on the prior availability of adequate information, "net profits" or "profit participation" bidding could be successfully utilized. In this system, the bidder who offers to share the highest percentage of net production profits with the government wins the award. This was used successfully in the instance of contract awards for the East Wilmington field (Long Beach) on state-owned submerged lands. In this case the field was reasonably well known in advance. Extensive preliminary exploratory activity, including seismic work and deep core drilling, had been performed by a public agency.

Similar extensive work should be done by or for the USGS and BLM prior to any lease sales in the Southern California OCS lands.

"Net profits" or "profit participation" contracts are used extensively throughout the world and increasingly so in all areas except the United States.

Indonesia and Burma recently awarded contracts calling for a 70-30 participation split: 70% to the host government and 30% to the contracting oil companies. The Middle East nations have long used this approach. Norway is using it and receiving 5%–40%. The United Kingdom is proposing a 51% participation.

Largely as a result of habit, institutional lethargy and inadequate data availability, the Federal Government has never used any bidding system other than the "front money" cash bonus-plus-royalty in 20 years of operating under the OCS Lands Act. The royalty requirement has never been other than 16⅔%. The 16⅔% royalty provision was established mostly through default and copying the 1954 practice of Texas and Louisiana rather than through conscious choice.[29]

Profit participation bidding would provide greater flexibility than the rigid and unthinking adherence to a fixed 16⅔% royalty provision. It would also provide greater economic return to the government over the life of the oil resource.

Profit participation bidding and the elimination of "front money" bonus bidding would also provide two additional benefits.

First, it would allow for greater participation by the smaller independent producing companies in OCS exploration and development activity. With the elimination of the prohibitive "entry fee" and the relative assurance of oil prospects based on adequate preliminary information, the smaller companies could secure bank financing for actual capital investment in development projects.

[29] Krueger, *op. cit.*, pp. 196 and 208.

Second, the capital investment dollars could then be employed directly "in the ground" on drilling and related projects rather than be diverted as a bonus to the Federal Treasury general fund as an additional "overhead" levy on the developer.

For example, the approximately $2 billion received from a recent lease sale in the Gulf of Mexico could have financed the drilling of 26,000 dry land wells or 3,000 offshore wells.

It must be emphatically stated at this point that there is an *absolute prerequisite condition* which must be met in order that a profit participation development program on the Southern California OCS can function fairly, equitably and with optimum benefit to the public. That is that the artificial market and pricing control now exercised by the major oil companies over California production, pipelines and refining *must be eliminated*. This system of artificial economic control has been discussed in detail in other reports issued by this Committee. This artificial economic control has been allowed to subvert the objectives of the net profits contracting system in the East Wilmington field. It must not be allowed to subvert any possible future Federal oil development program on the Southern California OCS.

Alternate sources of petroleum are available for intermediate-term needs

It is an axiom of the oil industry that if you want to produce immediate crude oil you drill and pump from fields already known to have oil rather than begin extensive exploration and wildcatting programs in places where you believe oil might be.

This is exactly what is happening in California now. There is an enormous amount of oil still in existing fields under the dry land portions of California. At the low posted prices for crude oil which have been in existence during recent years, it simply was not economically feasible to produce this oil. The costs of operations have been higher than the available posted selling prices. The Committee has received testimony that the low prices posted by the giant oil companies have actually prevented domestic crude oil production in California which has, in turn, driven many independent producers out of business.

Now this seems to be changing. With the higher prices currently available for "new and released" oil, drilling activity in California has almost doubled in the past year. The California Division of Oil and Gas has reported that the number of permits for new oil and gas wells has increased to 1,250 from 650 a year ago.

This oil is immediately available and can lessen the impact of reduced supplies from other sources.

Standard Oil Co. of California has made recent discoveries in the Tule Elk field. This oil, too, would be available long before OCS oil.

Exxon has made significant discoveries in the Santa Ynez field it has been developing as a result of the 1968 Santa Barbara Channel lease sale. By 1977–78 this field is scheduled for production of 100–150 thousand barrels per day.

Refinery capacity is being enlarged in California. SoCal is now embarked on the construction of two refineries—one in Richmond and one in El Segundo. Each refinery will process 175,000 barrels per day. A number of other expansions of refinery capacity are currently being planned by other companies in the range of an additional 20–40 thousand barrels per day of capacity for each expansion project.

The most significant source of additional oil for the West Coast is the Alaskan oil. Originally planned schedules called for shipments through the Trans-Alaskan pipeline of 600,000 barrels per day in 1977; 1.2 million barrels per day by 1978; and 2 million barrels per day by 1980.

Recently, however, the two companies controlling most of the Alaskan North Slope crude oil, ARCO and SOHIO (Standard Oil Company of Ohio), have called for a significant acceleration of this schedule. They propose to double the initial schedule to 1.2 million barrels per day in 1977; reaching capacity of 2 million barrels per day by 1978–79. ARCO and SOHIO control over half of the oil resources on the North Slope and have approximately a 60% interest in the pipeline.[46]

Crude oil in this quantity would more than meet the West Coast demand. In fact, SOHIO has recently announced that it has begun a feasibility study for the construction of a pipeline from California to the Midwest to dispose of what it already calls the "surplus" Alaskan oil.

[46] Los Angeles Times, June 7, 1974, Part III, p. 16.

SUMMARY AND RECOMMENDATIONS

For decades the major international oil companies have been treating the United States and the State of California as "Least Favored Nations." In order to cease being treated as "Least Favored Nations," the citizens of the U.S. and of California must insist on being treated otherwise.

The companies can meet the environmental and competitive economic requirements that we set. They have already done so for other nations. While we citizens still have the ownership rights to the OCS oil and gas resources, we have a powerful economic bargaining tool to secure a development program to meet our economic and environmental specifications.

We ask only that the giant oil companies treat us at least as well as they treat the Arab nations and the North Sea nations with regard to the timely disclosure of financial, technological, geological and geophysical data.

We ask only that they treat us at least as well as they treat Norway with regard to offshore production safety and ecological protection standards.

We ask only that they treat us at least as well as they treat the United Kingdom with regard to visual pollution, environmental amenities and onshore facilities.

We ask only that they treat us at least as well as they treat Indonesia, Burma, Saudi Arabia, Norway, the United Kingdom and other nations with regard to net profit participation development contracts.

Now is the time . . . Southern California is the place . . . to insist on comprehensive, rational modifications in the Federal OCS oil and gas leasing programs to bring them into accord with sensible national energy and environmental policies. And to insist that we no longer be treated as a "Least Favored Nation" by the "Imperium" represented by the giant international integrated oil companies.

Recommendations

(i) The proposed May, 1975, sale of oil and gas leases on 1.56 million acres of Federally owned submerged lands on the Southern California Borderland of the Outer Continental Shelf (OCS) should *not* proceed as presently scheduled.

(ii) The gathering and evaluation of comprehensive seismic and other geophysical, geological and environmental data *by the Government* should proceed:

(1) To determine whether the OCS oil and gas resources should be developed, and

(2) To determine the economic, contractual and environmental conditions under which these resources might be developed to the optimum benefit of all of the citizens of the United States—who presently own these resources.

(iii) A comprehensive national energy policy should be developed. This would encompass an assessment of (1) prospective national energy requirements and (2) alternate available resources to meet these requirements. At the present time, the Federal Energy Administration has scheduled a series of public hearings around the country to assist in the formulation of such a national energy policy.[a] OCS lease sales should be withheld until the completion of the National Energy Policy.

(iv) In conjunction with the development of a National Energy Policy, the investigations of the U.S. Senate Ocean Policy Study Group should proceed rapidly and should consider such proposals as those made by Senator Tunney in his pending bill (S. 2858—The Outer Continental Shelf Safety Act of 1974) to determine the priority of drilling on *all* OCS areas with regard to drilling safety, earthquake activity, etc.

(v) Any future offshore oil exploration and development should await the completion of the Coastal Zone Plan required by the California Coastal Zone Conservation Act of 1972 and should comply with the terms of the Plan, which is scheduled to be presented to the California Legislature in December, 1975.

[a] See Appendix III for discussion of FEA Hearings including the schedule for the hearings.

(vi) The Federal Energy Administration study to consider different possible policies toward U.S. firms active in the international oil business should be completed before any leasing of Southern California OCS lands.[42]

(vii) The Department of the Interior should comply with the stipulation of the Appropriations Committee of the U.S. House of Representatives for a detailed analysis of certain offshore drilling problems before instituting an accelerated program of leasing 10 million acres per year, and specifically before leasing the Southern California OCS lands.

(viii) Front-money cash bonus bidding should be eliminated and any future OCS drilling programs should be conducted under some form of increased profit participation contracts.

(ix) The legal requirement for absolute liability for any damage caused by oil spill or other faulty operation should be established. Mr. H. W. Wright of the Western Oil and Gas Association stated at the committee hearing that the "environmental impact of offshore drilling can now be categorized as *normal business risk, and certainly one that can readily be assumed under present circumstances.*" (Emphasis added) Recent technological development mass spectrometry have made it possible to "fingerprint" samples from spills and to trace them to their point of origin. With this ability to pinpoint responsibility, industry should certainly be required to assume absolute responsibility.

(x) The United States Congress should rapidly take the initiative in determining policy directions regarding offshore drilling, energy policy, OCS safety standards, bidding procedures, economic regulation, data disclosure, USGS and BLM data acquisition and the myriad other pressing issues in this field. These policy issues are too important to be left by default to the ad hoc determination of Interior Department bureaus. Congress should take the initiative in these matters as it did previously with the passage of the OCS Lands Act of 1953 and the Public Land Law Review Commission Act of 1964. The energy and environmental problems of the '70's requires the full and fair public consideration by Congress and the prompt enactment of effective and equitable policy guidelines.

APPENDIX I

STUDY OUTLINE—AN EVALUATION OF THE OPTIONS OF THE U.S. GOVERNMENT IN ITS RELATIONSHIP TO THE U.S. PETROLEUM INDUSTRY IN INTERNATIONAL AFFAIRS

(A Report for the Federal Energy Administration)

Study Concept: The Study will be based upon a factual investigation of the legal, political and economic aspects of the operation of the existing international system of petroleum supply and the predictable operative effects of alternative systems. The investigation will consist of personal interviews by the Contractor, the Los Angeles law firm of Nossaman, Waters, Scott, Krueger & Riordan, with representatives of domestic and foreign petroleum producing companies, petroleum consuming companies, and governmental agencies in the United States and in selected foreign countries having an interest in international petroleum supply. The investigation will also include the extensive use of questionnaires which will be sent to officials of selected states of the United States, petroleum companies (integrated and independent), petroleum consuming interests, consumer interests and industrial associations. Research into existing literature on selected aspects of the Study will also be conducted.

The Study calls for the delivery of a report which will include the results of all research by December 31, 1974. The Project Officer assigned to the Study by the FEA is John K. Wilhelm. The Contractor has designated Robert B. Krueger as Project Director for the Study. Assisting him will be Bruce G. Merritt and Paul R. Alanis. Dr. Walter J. Mead, Professor of Economics, University of California, Santa Barbara, will conduct economic research and evaluation in connection with the Study.

[42] See note 17, above, and Appendix I.

APPENDIX II

TABLE 5.—ADMINISTRATION OF NONDRILLING EXPLORATION TECHNOLOGIES

Requirement	Netherlands	Norway	United Kingdom
License.....	Exploration license required from Minister of Economic Affairs. Covers drilling and nondrilling reconnaissance.[1]	License required from the Ministry of Industry. Application to include general description of areas covered and methods. Copies forwarded to Ministry of Defense and Directorate of Fisheries.[2]	Exploration license is required from the Ministry of Power. Application to include area delineation and description. License permits physical and chemical surveys and core drilling to 350 meters, or as specified by the Ministry.[3]
Regulation.....	Regulation by Oil, Gas and Salt Division, Directorate of Mines. Information submitted to Inspector General of Mines includes objectives, area delineation and other details. Navy Chief of Staff and Ministry of Defense are informed. A variety of safety equipment and procedures are specified.[4]	Regulation by the Exploration Division of the Petroleum Directorate. Prior to surveys, Ministries of Industry and Defense, and Directorate of Fisheries require specific information on techniques and locations to be surveyed.[5]	Regulations by the Petroleum Division of the Department of Trade and Industry. The Division requires safe and workmanlike operations, prevention of loss of hydrocarbons, or unjustified interference with fishing or the living resources of the sea.[6]
Information.....	A weekly report with sufficient data to assess progress is sent to the Inspector General of Mines.[7]	Copies of essential field data and samples are to be forwarded to the Ministry of Industry on completion of survey. All other maps and sections derived from the survey are to be sent to the Ministry.[8]	Licensee is required to keep accurate records and deliver these to the Ministry when required. Monthly progress reports are required.[9]

[1] Netherlands, Mining Regulations, Continental Shelf, ch. 2, art. 18.
[2] Norway, "Royal Decree of Dec. 8, 1972, Relating to Exploration for and Exploitation of Petroleum in the Seabed and Substrata of the Norwegian Continental Shelf," secs. 5-b.
[3] United Kingdom, the Petroleum Regulations 1966, schedule 5, clauses 1-4.
[4] Ibid., arts. 18-24.
[5] Ibid., sec. 9.
[6] Ibid., schedule 5, clauses 9-11.
[7] Ibid., ch. 2, art. 27.
[8] Ibid., sec. 10.
[9] Ibid., schedule 5, clauses 12-15.

[From the Oil Daily, July 25, 1974]

APPENDIX III

TOWN MEETINGS SCHEDULED ON PROJECT INDEPENDENCE

(By Tony Lo Proto)

WASHINGTON—As a part of his subtle redefinition of the constantly redefined 'Project Independence', Federal Energy Administrator John C. Sawhill has arranged for public hearings to be held around the country into the subject of a national energy policy (nee Project Independence).

Sawhill redefined President Nixon's overly-ambitious plan for national self-sufficiency at the initial meeting of the 25-member blue ribbon committee on Project Independence last week: "I see Project Independence as synonymous with the development of a National energy policy," he said.

In announcing the round-the-nation public hearings into Project Independence, Sawhill said, "Every American who buys gasoline at the pump, pays a utility bill, or shops in a supermarket has a stake in Project Independence."

Sawhill asked the American public to lay apathy aside and to show up at the "Project Independence" hearings with fresh ideas for the nation's emerging energy policy blueprint.

Hearings will be held in 10 cities around the nation from Aug. to Oct. 10.

The results will be incorporated in the final blueprint for U.S. energy independence to be presented to the President Nov. 1, said Sawhill.

"The era of cheap, abundant energy is over for America," Sawhill said, reiterating one of his favorite themes. "I urge citizens to put their heads together at these hearings to help decide how we can best meet the energy needs of the 1980's and beyond."

Added Sawhill, "There are millions of people in this country who are eager to participate in the important decisions being made by the federal government in Washington."

"We're bringing these hearings out to the people to give them the opportunity to help make the energy policies which will effect all our lives."

Individuals or groups wishing to testify at one of the Project Independence hearings are asked to write that Federal Energy Administration regional office sponsoring the hearing they wish to attend.

Written requests to testify should arrive in the appropriate FEA regional office at least 10 days in advance of a hearing, and should include name, address, phone number, and subject area to be addressed.

Citizens who cannot take time off from work during the day may testify at evening sessions. Citizens who wish to testify but are unable to attend a hearing may submit written testimony up to 10 days after the hearing.

FEA requests that oral testimony be held to approximately 10 minutes per individual (written testimony of any length can be submitted). Upon specific request, more time may be granted and more than one person representing a particular group may speak.

However, to insure that all who wish to testify have the opportunity to do so, FEA urges participants to be concise.

Concluded Sawhill, "I'm looking forward to the kind of spirited interaction that will be educational for citizens and FEA officials alike. A strong public participation at these hearings can do much to improve the final Project Independence blueprint."

APPENDIX IV

A PARABLE FOR OUR TIMES

OIL: SEAFOOD AND SANITY

(By Ernest B. Furguson)

WOODS HOLE, MASS.—This is where the world's foremost marine scientists have been exploring the plants, animals, currents and chemistry of the oceans for more than 45 years. Lately their research has produced evidence against mixing oil and water that must be overwhelmingly final—to every class of man but one.

First, the evidence. Then a world about that class of man.

The most chilling knowledge added in recent years to all the layman—obvious reasons for not building seaside refineries, or otherwise rising oil spills into man's precious remaining water resources, is that oil persists in water and on the bottom and shoreline almost indefinitely. The parallel fact that makes this frightening to fishermen and those millions sustained by seafood is that the concentration of oil in marine life becomes many times greater than that in the surrounding water.

Dr. Holger Jannasch is conducting deepsea experiments following up the accidental discovery that a box lunch left for more than a year aboard a scientific submarine that sank in more than 6,000 feet decomposed much more slowly than it would have at sea level.

This research is proving that high pressure and low temperature slow the breakdown of other degradable matter—specifically including oils. When they sink to the deep ocean floor after discharge at sea, they do not break up and dilute; they accumulate year by year.

Dr. Frederick Grassle has devoted himself to studying the aftermath of the fuel oil spill in Buzzard's Bay, north of here, in September, 1969. He has concluded that it takes at least five years for bottom sediment to recover from a single such spill, and that this constantly affects subtidal life for that period.

But oysters in an area with tiny but steady oil leakage never will recover completely, Grassle says. He maintains that the public should be less concerned about the inevitable but infrequent catastrophic spill than about chronic low-level leakage, which occurs in the most modern, theoretically immaculate oil operations.

Dr. John Teal, author of the widely read study, "Life and Death of the Salt Marsh," has learned that spilled oil penetrates the shoreline and acts as a seemingly permanent reservoir, steadily oozing out small amounts of oil.

His precise studies have proved that, after two days in water containing only 100 parts of oil per million, oysters will accumulate 400 times that concentration of oil in their own tissues, after 49 days of such exposure, they have 3,000 times the amount in the water.

The conclusion is that, given any alternative, sane men never will build refineries or other oil facilities on bodies of water, especially where seafood is even remotely involved.

These and dozens like them are pure scientists, not laboring with the hired bias of industry researchers and not as environmental crusaders, either. Their

warnings come with cold objectivity but with uniform alarm. Anyone who knows what science has found out about oil and water cannot insist on mixing them against the evidence—and indeeed against the human being directly affected.

But there is that class of man who insists on exactly that. He is the man who stands to make extra millions by pressing on.

He is, for example, the operators of Steuart Petroleum Co., a Washington-based conglomerate that seems determined to defy science, common sense, public opinion and the law to build a refinery on the tranquil, oyster-rich lower Potomac River.

It has been trying for six years. It has been blocked repeatedly. Last winter, the Maryland Legislature passed a law saying it could not proceed unless approved by a public referendum in St. Mary's County. Last month, the public turned down the refinery by a 2-1 vote. Yet now the company says it is going ahead with construction, because its lawyers say the law is not legal.

Meanwhile, the county authorities have sent a deputy with a letter ordering the building halted. The county attorney plans to ask for a court injunction. The governor has said the company might be building, but it is not going to operate any oil refinery there. Yet still the company ignores all and goes ahead—which suggests that, where science and the law do not prevail, perhaps it is time to consult the National Guard.

Senator TUNNEY. Our next witness is Robert Knecht, Director, Office of Coastal Zone Management, Department of Commerce.

He will be followed by Ellen Stern Harris.

STATEMENT OF ROBERT W. KNECHT, DIRECTOR, OFFICE OF COASTAL ZONE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERE ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. KNECHT. Thank you, Mr. Chairman. As you know, I have a prepared statement which I have submitted to the committee.

The first page commends the national ocean policy study for the interest it is taking in important national issues and goes on to recite some of California's coastal problems and the fact that, of all the coastal States, California can be considered the most coastal.

Senator TUNNEY. My friend, Ted Stevens, would disagree with you.

Mr. KNECHT. I would like to go directly to the point of my testimony.

Thank you Mr. Chairman and members of the committee for this opportunity to appear before you today to discuss the relationship of the Federal coastal zone management program and the State efforts being supported by it to the proposed leasing of the Outer Continental Shelf off southern Cailifornia. I would like to preface my remarks by noting the importance of the work being carried out by the National Ocean Policy Study. The investigations undertaken by your committee in recent months, of which the present hearings are a part, are aimed at some of the most critical problems facing our Nation today. Close and obvious ties with ocean policy exist between such important national problems as the provision of adequate energy supplies, the fight against inflation, and our efforts to secure and maintain a quality environment.

Mr. Chairman, it is particularly fitting that this discussion of coastal problems is occurring in the State of California. Not only is California the Nation's largest State in terms of population, but it is clearly one of the country's most "coastal States". More than 80 percent of the State's population lives within its coastal area and is directly influenced by the adjacent marine environment. California's coastal resources are perhaps the most dominant force in the life of the State. One needs only to think of the importance of recreational activities

along California's beautiful shoreline to recognize the importance of this dimension both to the State's economy as well as its charm.

The various aspects of ocean and coastal activity all seem to be present in California. Fishing, coastal recreation, marine transportation concerns, port and harbor development, aesthetics, offshore oil and gas development, second home development, and a host of other coastal uses seem to come to "full flower" in this State. Yet California manifests something more than a mere confluence of forces—something more than an inventory of ocean-related dimensions would imply.

A number of these activities appear to be approaching the critical levels where the open conflicts with other uses are occurring. One can see this in the tension between private and public development, in the fight for improved public access to beaches, in debates between commercial and sports fishermen, to say nothing of the more basic differences that exist between a conservation and preservation orientation and economic development.

It is clear the time has come—to this State as well as to many of the other coastal States—for development of a rational process of decisionmaking and intergovernmental cooperation to address these developing conflicts in a balanced and reasonable manner.

The citizens of California clearly and dramatically registered their concern and recognition of the problem when, in November of 1972, they approved Proposition 20, the California Coastal Conservation Act. As you are aware, Mr. Chairman, this act created the California Coastal Zone Conservation Commission and its six substate regional commissions.

An important forerunner of this statewide effort was initiated by the State legislature's action in 1969 which created the Bay Conservation and Development Commission and assigned it responsibility for regulating development of the San Francisco Bay, again, a unique development in coastal zone management.

In adopting its coastal zone management program in 1972, California became one of the first States in the Nation to begin the development of a comprehensive coastal zone management program. The people of this State, by their action, the first coastal zone initiative in the Nation, demonstrated an awareness of the value of California's coast and its resources and the necessity for establishing a process of sound planning and administration which would seek to balance the forces competing for the use of the State's finite coastal zone.

During the same period, as the State of California was working to adopt coastal zone management legislation, the Federal Government was engaged in a similar activity. Strong recommendations for both State and Federal action were contained in the so-called Stratton Commission Report issued in January of 1969.

After 3 years of congressional deliberations and debate on various measures, the Coastal Zone Management Act of 1972 was passed in October of that year. A reading of the policy statements and findings contained in the Federal legislation will show that its basic philosophy and legislative intent are rather similar to those contained in California's proposition 20. Because the two pieces of legislation were developed during the same time period, they dovetail in their overall approach.

However, it must be understood at the outset that the Federal role in coastal zone management is vastly different than the State role

contained in proposition 20. The Federal role, as outlined in the Coastal Zone Management Act, is one of providing incentives, encouragement, and support to the State efforts.

In the Federal legislation, the prime responsibility for developing, implementing and operating the coastal zone management program is left at the State government level.

The Federal measure creates a voluntary program to provide financial assistance and support to States as they begin or continue the process of the development of rational coastal zone management programs.

It clearly does not put the Federal Government in the land use or local zoning business. Those important functions remain the responsibility of local and State governments.

Several of the findings contained in congressional reports which accompanies the Coastal Zone Management Act are of interest. Specifically, Senate Report No. 92–753 contained the following findings:

That the increased demand for use of the waters and adjacent uplands in the coastal zone for commercial, industrial, and recreational purposes are endangering biological organisms and natural features of this area; and,

The fragmentation of State and local governmental authority in the coastal zone has exacerbated pressure for economic development at the expense of other values, and, therefore, there is a need for expanding State participation in the control of land and water use decisions in the coastal zone, but within the context of a comprehensive management program.

In fairness, it also must be said that uncoordinated and single-purpose Federal actions also have contributed importantly to our current coastal zone problems. Recognizing this, the Federal act requires that, after a State has its coastal zone management program approved at the Federal level, Federal activities directly affecting the State's coastal zone, must be consistent with the State's approved program to the maximum extent practicable.

Mr. Chairman, I would now like to address myself very briefly to the progress we have made to date in implementing the Federal legislation. A two-step process is established in the act to assist States in coastal zone management.

States are assisted in the planning and development of coastal management programs by applying for and receiving program development grants under section 305 of this legislation. The second phase, provided under section 306, authorizes Federal grants for the operation of management programs which have been federally approved. Both types of grants involve two-thirds Federal funding and one-third State matching.

To date, management program development grants under section 305 have been awarded to 28 of the 30 coastal States and the Commonwealth of Puerto Rico. A Federal grant of $720,000 for this purpose was awarded to the State of California in April of this year. I should add that this grant was the largest that our office could make to any State under the law during fiscal year 1974 reflecting our strong desire to assist the State in its coastal management efforts.

In all, approximately $7.4 million of Federal funds have so far been made available for grants to the coastal States and their subdivisions.

Upon the completion of congressional action on our current year budget, we expect to have an additional $9 million available for second-year grants to these States so that they can continue their work.

We expect that the first applications for grants for the administration of approved management programs under section 306 will be received by our office next spring or summer.

Mr. Chairman, the initial response of the coastal States to the first phase of the Federal program provides sound evidence that the Coastal Zone Management Act is both viable and effective in encouraging States to establish more rational processes for managing their coastal areas.

I would like now to address myself to two provisions of the Federal act which have application to the Outer Continental Shelf oil and gas issue currently facing southern California.

The first requires that an applicant State show that its proposed management program provides for adequate consideration of the national interest involved in the siting of facilities necessary to meet requirements which are other than local in nature. This is the so-called national interest provision. It asks that the State not take a blinders-on view and develop a management program devoted solely to meeting the State's needs. It should show understanding of its role in helping to meet national needs.

Precise delineation of the meaning of the national interest is, of course, a difficult interpretive judgment and our office is presently considering the parameters of this issue. Our preliminary conclusions in this regard are contained in a set of program approval criteria published in draft form in the Federal Register on August 21, for public comment and review.

The second provision which is relevant to the present discussion is contained in section 307 of the act. Subsections (c) (1) and (2) provide that any Federal agency conducting activities or undertaking any development projects directly affecting the coastal zone of a State shall conduct those activities or undertake those projects in a manner which is consistent with a State-approved management program, to the maximum extent practicable.

Commonly referred to as the "Federal consistency" provision of the act, this stipulation does not become legally operational until a State has its management program approved by the Secretary of Commerce. Those of us involved in administering the program and the coastal States we are working with, see the Federal consistency requirements as an important incentive to State and local governments.

The critical question, is, of course, the relevance of the Federal consistency provision in a State which is in its program development phase under section 305 and which does not yet have a coastal zone management program approved under section 306 of this act.

Legally, Federal consistency does not yet apply in this case. However, a key policy which guides our support of State management programs during their development phase is drawn from section 303 of the act. In that section, the Congress declared that it is national policy "for all Federal agencies engaged in programs affecting the coastal zone to cooperate and participate with State and local governments and regional agencies in effectuating the purposes of this title."

We believe that the intent of Congress was that Federal agencies

should work closely with the States and should take into account evolving State coastal zone policies in planning and carrying out their Federal missions. The Office of Coastal Zone Management is strongly encouraging Federal agencies to work actively with State coastal zone management agencies in the formulation of State management plans.

Upon approval of a State's management plan, the more stringent requirements for Federal consistency with State policies will apply and will be supported by our office. We feel that this provision will establish a new kind of more effectively coordinated Federal-State relationship which will result in more balanced decisionmaking relating to the myriad of Federal activities which could impact a State's coastal zone, including oil and gas exploitation of the Outer Continental Shelf.

Mr. Chairman, I think the rationale contained in the Federal Coastal Zone Management Act makes a great deal of sense. Until a State has developed the comprehensive planning called for under both the State and the Federal act and therefore has decided the policies that will govern the uses of State coastal waters, those of southern California, for example, it is not in a strong position to deal effectively with the Federal Government concerning uses of the Federal Outer Continental Shelf in that area. Also, until the State has officially adopted a coastal management program by appropriate legislative and executive action, it has difficulty speaking with one voice with regard to its desires and intentions.

The responsibility of my office is to encourage and support the development of State coastal management programs at as rapid a pace as possible. In the case of California, it is probably unfortunate, but true that the proposed leasing action could occur prior to the submission and Federal approval of the State's coastal zone management program.

As we know, the State is involved in litigation with the Department of Interior with regard to a possible delay in the leasing timetable. From the standpoint of the Federal coastal zone management program, we will do everything in our power to provide assistance to the State in completing its management program development process as rapidly as possible.

We are already engaged in discussions with the State with regard to the possibility of additional and accelerated grant funding. Also, we will make every effort to get as rapid a review as possible of the State management program once it is submitted for Federal approval.

In the meantime, we are attempting to use our good offices to encourage the closest possible cooperation between Interior Department representatives engaged in planning for the offshore activities and the States' coastal commissions. Clearly, if the Federal Government does decide to go forward with leasing on the present timetable, a maximum effort should be made to develop operating plans and regulations that are in harmony with the general directions being taken by the States' current coastal planning efforts.

In closing, the Federal Coastal Zone Management Act calls for a new kind of shared decisionmaking with regard to the use and protection of our Nation's valuable coastal areas. The National Oceanic and Atmospheric Administration is dedicated to realizing this goal at the earliest possible date.

Mr. Chairman, this concludes my remarks. I appreciate the interest and support of the committee in the work of the coastal zone management program and I commend the National Ocean Policy Study for the initiatives it is taking in the ocean policy area.

I would be happy to answer any questions from the committee.

Senator TUNNEY. Thank you, Mr. Knecht, for your interesting statement. I think it is important to point out that your Office of Coastal Zone Management is the only agency of the Federal Government charged with the responsibility of preserving and protecting and planning for the management of our coastal zone areas. Is that correct?

Mr. KNECHT. To my knowledge, that is true. However, there are lesser parts of the problem being dealt with on a per-topic basis, for example, in the area of coastal wildlife refuges, in other Federal Government departments.

Senator TUNNEY. One thing I would like to have clear for the record—if there were a delay by the Interior Department in the leasing schedule until after the California Coastal Commission had prepared its report and it has been accepted by the State legislature, at that point in a leasing program, the leases of the Department of Interior would have to indicate that they had gotten a certification of the Coastal Commission that their drilling activities were in compliance with the coastal plan, is that correct?

Mr. KNECHT. I think, Mr. Chairman, that would generally be the case. I would answer the question this way, The Federal consistency requirement and the strength of various aspects of that requirement has yet to be tested. I think we are in the same situation we were in a year or so prior to the time that the first environmental impact statements were prepared and submitted under the National Environmental Policy Act.

At that point, the strength of the EIS process was untested. We now understand the impact of that program better. Until we have a chance to test the strength of this aspect of the CZM program, my answer has to be somewhat vague. Section 307, C–1 and C–2, involve Federal activities and C–3 involves licenses and permits. It is a question of whether or not a Federal oil and gas lease would be considered a direct action by a Federal agency or be considered a license and permit as to just what the consistency provisions might mean.

When the State has officially adopted a program and it has been approved at the Federal level, it becomes an equal partner with the Federal Government determining how the coastal areas should be used.

Senator TUNNEY. In going ahead with the leasing program prior to the time the State coastal commissions develop their plans, the law in a sense is circumvented by the Department of Interior because they do not have to comply with section 307.

Mr. KNECHT. Using that timetable, it would not come into being, that is right. The FEA representation indicated that after the lease sale the Interior Department receives development and operation plans from the lessee. If, in the interval between the lease sale and the development plan, the State had its program approved at the Federal level, it seems an additional opportunity would exist to see to it that the development aspects are made consistent with the State's approved plan.

Senator TUNNEY. Do you think it is within the spirit of the Coastal Zone Act that the Interior Department delay the 1975 lease sale, if this is the view of the government of California?

Mr. KNECHT. I think it is clear that the Coastal Zone Management Act recognizes that many of the problems in the coastal zone today have come from fragmented and independent approaches to decision-making.

The act provides incentives to bring about coordination in these activities. To the extent that an earlier leasing timetable would not allow for mutually coordinated planning, I agree with your statement.

It seems clear to me that the development of the Outer Continental Shelf is precisely the kind of situation that demands a cooperative approach to overall planning and operation.

Senator TUNNEY. Isn't it true that if the Interior Department should lease the 1.6 million acres off the coast of California and if the southern California city or county governments refuse to grant permission to the oil companies to bring the pipelines ashore or build the refineries or storage facilities, then, in effect, the oil companies would be stymied unless they had floating rigs which would then act in the same fashion as the onshore storage facilities, separating plants, refining plants, et cetera?

Mr. KNECHT. Absolutely true; but I think earlier statements indicate that that might not be the best way to go in terms of potentiality for pollution of the marine environment as well as the economics. Certainly the land use within the territory of the State remains in the control and power of State and local jurisdictions.

Senator TUNNEY. It appears their cooperation is imperative to have a rational, reasonable plan.

Mr. KNECHT. Certainly.

Senator TUNNEY. I understand the Coastal Zone Management Act permits that portions or segments of a coastal zone management plan may be submitted separately for approval in advance of the completion of the entire State coastal management plan.

Mr. KNECHT. Yes. There is a provision that allows for a segmented approach to management program approval. Reading the legislative history, I think that it was inserted because of the extensive coastline of Alaska. States might have uneven pressure on portions of their coasts. The segmented management program must be a part of the effort that will become statewide eventually.

Senator TUNNEY. Take the California situation. Does that mean that the southern California area could be planned for by the Coastal Commission in advance of other State coastal areas; that that segment of the overall coastal plan could be submitted to the Federal Government for approval, for ratification and that it then could be used in consideration of the decision to go ahead with offshore leasing?

Mr. KNECHT. I am not a lawyer, Mr. Chairman, but my reading of the act would suggest that was true, provided it was clearly going to be a part of the larger comprehensive State effort.

Senator STEVENS. Our Greater Anchorage Borough has so much pressure on it in the Cook Inlet that the borough mayor came down and testified and asked for that type of provision. A segmented planning program can be used when there are special considerations involved. A fragmented plan would still have to be finally acceptable, as you say.

The problems in this area present such unique considerations. As the one who offered it, and Mr. Hussey was there at the time we took it up, I think it is entirely consistent with the intent of that provision.

Senator TUNNEY. Do you know if the California Coastal Commission has any knowledge of that?

Mr. KNECHT. I am sure they have knowledge of the provision but I have had no discussion with the commission.

Senator TUNNEY. They will be testifying. I will have the opportunity to ask them. Has there been any communication?

Mr. KNECHT. Not on that particular point.

Senator TUNNEY. Do you have questions, Senator Stevens?

Senator STEVENS. Pardon me. I had a long-distance call. I did read your statement and I concur with what you said. It is a good statement.

Senator TUNNEY. I want to congratulate you for an excellent statement, one I found very interesting. It brought to my attention certain points I was not aware of about the act. I appreciate your testimony and I appreciate your coming to California to give us the benefit of your thoughts.

Do you feel that we will be able to get more money for the California Coastal Commission this coming year?

Mr. KNECHT. Yes, it is in our plan for second-year grants. We have again put California at the maximum-grant size which, if Congress appropriates at the administration's requested level, will be $900,000. The act has a current appropriations limit of $9 million and a constraint that no State can receive more than 10 percent of that. There is pending legislation in the House and Senate that would increase the $9 million maximum authorization. Note that this is not a sales pitch.

Senator STEVENS. If I had my way, you would get a percent of that bonus money out there and you wouldn't have to worry about the appropriations.

Senator TUNNEY. I agree with you, Senator Stevens. Our next witnesses are Ellen Stern Harris, member of the California Coastal Commission and Joe Bodovitz, executive director of the California Coastal Commission.

After them will be Assemblyman Sieroty.

STATEMENT OF ELLEN STERN HARRIS, MEMBER, CALIFORNIA COASTAL COMMISSION; ACCOMPANIED BY JOSEPH BODOVITZ, EXECUTIVE DIRECTOR, CALIFORNIA COASTAL COMMISSION

Ms. HARRIS. Thank you, Mr. Chairman. My name is Ellen Stern Harris. I am vice-chairwoman of California's coastal commission and a member of the Federal Coastal Zone Management Advisory Committee.

Formerly, I represented the public-at-large on California's water quality control board for this region and have served as a member of this State's Environmental Quality Study Council.

On behalf of the California Coastal Zone Conservation Commission, I am authorized to strongly reiterate today, our commission's unanimously adopted resolution of July which was directed to the Federal Government.

As you may recall, we urged deferral of offshore leasing until we have completed the planning which we are mandated to do by the

voters of California when they approved passage of proposition 20 in 1972.

To proceed with this premature leasing, I believe, makes a mockery of the countless hours and many months of work by concerned citizens, commissioners and staff already invested in the rational planning of California's coast.

It also raises further questions as to Federal fiscal responsibility. California only recently received three-quarters of a million dollars from the National Oceanic and Atmospheric Administration to be spent on coastal planning.

Perhaps this commitment of funds has escaped notice by the Department of the Interior or perhaps they have chosen simply to ignore it. In addition, Californians have dedicated millions of their State tax dollars to this planning effort which, according to law, shall provide for the protection, restoration, and enhancement of our coastal zone.

Because the commission has not yet had an opportunity to fully develop and study the energy element of its overall plan, in our resolution we urged that offshore leasing not proceed until we, and other appropriate State agencies, have adequately reviewed and approved the Federal proposal for drilling.

We ask nothing less than full concurrence in this matter, not just consultation or coordination, but concurrence.

From here on out, I will be speaking my own views, simply because the commission has not, as yet, had the opportunity to fully study these matters which will be critical to our statewide coastal plan.

Among the questions to which I feel we must find answers, before leasing is permitted, is whether the need for this oil is actual or assumed. As yet, we have no national energy policy—apologies to Mr. Stevens—and California's own energy conservation and development commission will not begin its existence until January. It is this new commission which our legislature has charged with assessing and forecasting energy needs as well as devising measures to reduce wasteful, inefficient, and unnecessary consumption of energy.

It is also charged with providing the State with an integrated research and development program regarding alternative sources of energy. These may include solar, geothermal, hydrogen, whatever.

Earlier this year, then-Vice President Gerald Ford estimated that Americans could conserve up to 40 percent of the energy we now use. He called for a conservation ethic in energy use and endorsed a new idea he called:

> Project Protection . . . an action plan that takes into account the impact of increased domestic energy production on natural resources and land use.

One of California's leading energy authorities, Dr. Ronald Doctor of Rand, has said that:

> Recent studies at Rand, and elsewhere, indicate quite clearly that it is possible to reduce future energy demands substantially by reducing wasteful uses of energy; that these reductions can be achieved with little or no disruption in our economy; that on the contrary, effective implementation of energy conservation measures can lead to significant economic benefits.

Further Dr. Doctor stressed:

> Conservation alone is not enough. We still must develop new sources of energy. In this effort, conservation can serve to buy time, sufficient time to ensure that the new sources we develop will be safe, environmentally sound, and, hopefully, renewable.

Last year, when we were first threatened with the possibility of offshore leasing, I asked one of this nation's top energy experts, S. David Freeman, director of the multimillion dollar Ford Foundation energy policy project, for his views.

He told me:

I don't know that the potential oil to be brought in from those areas is worth the risk. I don't know that the potential use of those areas isn't best for recreation and scenic values in any case.

Freeman emphasized that:

We have only so much of the coastal zone left. The gulf zone is already pretty much dedicated to that activity with acceptance there. But, most people live near the East and West coast and they are used intensively for recreational purposes. We need land-use planning with teeth in it which takes this into consideration.

When I asked him about national security considerations he suggested that:

Perhaps exploratory drilling should be done and then that oil which is discovered should be reserved for emergency use. Having our own stockpile is the best counterleverage.

I couldn't help but wonder why indeed we couldn't have our oil reserves available with subsea completions on a standby, ready-to-pump basis. That way, other nations would realize that embargoes no longer would be effective.

I believe that our commission and your committee must carefully evaluate whether or not this proposal for drilling off California's shores, if implemented, may cause an irresponsible depletion of vitally needed, irreplaceable resources for this and future generations.

This includes the nonrenewable petroleum resource itself as well as the degradation of the inshore marine habitat, thus further diminishing the productivity of our marine protein resource. It also means a devastating industrialization of our coast with its resultant visual despoilation as well as certain, further deterioration of our already poor air quality.

We will have to consider the economic consequences of allowing such damage to occur to our magnificent scenic coastal zone and the effect this would have on California's third largest economic sector, tourism. Incidentally, you may be interested to know that Security Pacific National Bank just came out with the figures for 1973. Tourism represented $2 billion worth of industry for southern California alone.

As far as California's participation in the national interest, I believe that, historically, this State has already contributed far more than most to the Nation's oil supplies. California's coastal zone, in my view, is every bit as much a national treasure as the resources of the outer continental shelf. Maintaining its integrity is not only the right of this State but is absolutely essential to its future.

As for balance-of-payment considerations, California can be expected to contribute its share toward reestablishing a more favorable balance. But, the method it may prefer is through the export of its food and fiber, a renewable resource which represents this State's No. 1 economic strength, agriculture.

Among the reasons I feel it is imperative for California to have the final word on the disposition of the submerged lands adjacent to her coastal zone, is that I seriously question the Department of Interior's

business judgment. Why have they proposed such a massive area for leasing? As oil becomes ever scarcer, it is bound to become even more expensive.

Why give the oil companies everything, now, at relatively low 1975 prices? Why didn't Interior propose leasing just the Cortez Ridge, for example?

Personally, I believe that oil is a marvelous long-term investment. Better oil under our seas than money in the bank, especially with the value of money lately.

We've yet to receive the oil from Alaska or the North Sea. I believe that time is on our side if, and only if, the Federal Government begins now to take energy conservation seriously by establishing firm policies and implementing them to accomplish this goal.

So far we have had only talk about conservation of energy by Federal officials. It is these same Federal officials who go about pushing for ever more energy production, no matter the environmental consequences. Our patterns of mindless consumption must be reassessed as if we expect to have grandchildren. We are behaving today as if we had no regard whatever for our obligation to future generations. California's priceless heritage of beauty and grandeur will not survive unless we take firm steps now to assure its protection.

Senator Tunney, I sincerely hope you and Senator Cranston will soon call together the California congressional delegation and arrange a meeting with President Ford to express the clear wishes of Californians with respect to this more inappropriate proposal being presented to us at this most inappropriate time. I know that the citizens of this State have made their deep feelings known to you on this matter as seldom before on any issue. I respectfully urge you to heed their pleas. Thank you.

Senator TUNNEY. Don't be too sure. In California we have a literate population and constituency and I cannot think of any major national issue that doesn't have direct impact on California and doesn't lead to outflow of letters to their Congressmen and Senators. One decision made recently by President Ford brought, in a period of 3 days, 3,000 letters of communication to my office.

Ms. HARRIS. I beg your pardon. I would be happy to provide you with copies of the thousands of signatures we got on the beach on Labor Day. Thank you very much.

Senator TUNNEY. Thank you very much, Ms. Harris. Mr. Bodovitz, do you have a prepared statement?

Mr. BODOVITZ. No, I didn't. I would just like to comment on a couple of points and then to answer questions. I have available copies of the resolution adopted by the coastal commission to which Ms. Harris referred. The point I would like to stress——

Senator TUNNEY. I wish you would make them available. They will be included as part of the record.

[The following information was subsequently received for the record:]

ASSEMBLY JOINT RESOLUTION No. 108

INTRODUCED BY ASSEMBLYMEN MEADE, LOCKYER, SIEROTY, DEDDEH, BERMAN, BURKE, COLLIER, FORAN, JOE A. GONSALVES, INGALLS KEYSOR, LANTERMAN, MACGILLIVRAY, M'CARTHY, PAPAN, WILSON, AND WOOD—APRIL 18, 1974

(Without reference to committee)

ASSEMBLY JOINT RESOLUTION No. 108—RELATIVE TO OFFSHORE OIL AND GAS PRODUCTION

LEGISLATIVE COUNSEL'S DIGEST

AJR 108, as introduced, Meade (W.R.T.C.). Offshore oil, gas production.

Memorializes the President and Congress to support and adopt such laws and regulations as will permit the state to participate in decision-making relating to the leasing of federal submerged lands off the California coast for oil or gas production. Requests that federal laws and regulations relating to such leases be at least as comprehensive and stringent as state laws and regulations governing oil or gas development under lease on state tidelands and submerged lands, and that the federal staff assigned to carry out such federal laws and regulations be at least as competent and at a comparable manpower level as the staff employed by the state for such purposes. Requests that the state be compensated by an adequate portion of the revenue derived from such federal leases, or by a share of the crude oil production itself, for expenses incurred by the state in providing support functions.

Fiscal committee: no.

WHEREAS, The President of the United States has indicated that the leasing of offshore waters for oil or gas production in coastal areas under federal control may be increased by 10 million acres in the next year; and

WHEREAS, The Council on Environmental Quality has informed the President recently that drilling for oil and gas in the Atlantic Ocean offshore from the States of Virginia, Maryland, Delaware, and other East Coast states is acceptable; and

WHEREAS, Expert testimony on known crude oil reserves off the California coast has estimated proven and potential reserves of crude oil in the billions of barrels; and

WHEREAS, Federal authorization for oil and gas drilling off the California coast is imminent and, in fact, the United States Bureau of Land Management has taken initial steps to authorize the leasing of more than seven million acres off the southern California coast, with tracts to be announced for lease in July 1974; and

WHEREAS, At the present time the State of California has no control or voice in the decisionmaking process for the leasing of offshore waters under federal jurisdiction, even though the state has a primary interest in the safety, pollution prevention, economics, and aesthetics of such operations; and

WHEREAS, The state has itself leased more than 175,000 acres of tidelands and submerged lands along the coast, and permitted, under state control, and drilling of more than 4,000 wells and core holes with no significant pollution incidents; and

WHEREAS, The state is known to have superior expertise in this area, with more stringent controls and safeguards than are required by the federal government; now, therefore, be it

Resolved by the Assembly and Senate of the State of California, jointly, That the Legislature of the State of California respectfully memorializes the President and the Congress of the United States to support and adopt such laws and regulations as will permit the State of California to participate in all decisionmaking relating to the leasing of federal submerged lands off the California

Coast for oil or gas production, including granting to California the right to recommend denial of any proposal which endangers the state's coastline or life or property in the state, constitutes an immediate or potential geologic hazard, or is environmentally incompatible on an aesthetic or total use basis; and be it further

Resolved, That the Legislature of the State of California respectfully requests that federal laws and regulations relating to the leasing of offshore lands for oil or gas production be at least as comprehensive and stringent as laws and regulations governing oil and gas development under leases by the state on state tidelands and submerged lands, and that the federal staff assigned to carry out and enforce the federal laws and regulations be at least as competent and at a comparable manpower level as the staff employed by the State of California for these purposes; and be it further

Resolved, That the Legislature of the State of California respectfully requests that the state be compensated by an adequate portion of the revenue derived from oil and gas production on federal submerged lands off the coast of California or by a share of the crude oil production itself, inasmuch as the various jurisdictions within the state, and the state itself, will be required to supply, and bear the cost of supplying, many support functions, including, but not limited to, police, fire protection, and community services; and be it further

Resolved, That the Chief Clerk of the Assembly transmit copies of this resolution to the President and Vice President of the United States, to the Secretary of the Interior, to the Speaker of the House of Representatives, and to each Senator and Representative from California in the Congress of the United States.

ASSEMBLY JOINT RESOLUTION NO. 122 AMENDED IN ASSEMBLY AUGUST 22, 1974

INTRODUCED BY [ASSEMBLYMAN BERMAN] ASSEMBLYMEN BERMAN, CORY, PRIOLO, AND SIEROTY, AUGUST 13, 1974

ASSEMBLY JOINT RESOLUTION NO. 122—RELATIVE TO OFFSHORE OIL DRILLING IN SANTA MONICA BAY

LEGISLATIVE COUNSEL'S DIGEST

AJR 122, as amended, Berman (P., L.U. & E.). Offshore oil drilling.

Declares the opposition of the Legislature to a designated proposal to drill for oil in [Santa Monica Bay] *the southern California area*, and memorializes the President and Congress to enact legislation designating the outer continental shelf a national preserve to be used for mineral production only in the event of a congressionally declared national emergency.

Fiscal committee: no.

WHEREAS, The United States Department of the Interior is preparing a plan to lease approximately [1.5] *1.6* million acres of outer continental shelf [land in the Santa Monica Bay] area *lands along the southern California coastline* for offshore oil drilling operations; and

WHEREAS, The department's *proposed* development of these lands appears to be based on Project Independence, a federal [proposal] *policy* requiring energy self-sufficiency [which only recently commenced its preliminary hearings] *for which preliminary hearings commenced only this month*, and is not the result of any comprehensive balanced energy policy of conservation and development; and

WHEREAS, It has not been demonstrated that the development of these *offshore* lands is necessary to meet future energy needs that cannot be met by the development of other areas [less likely to be as seriously harmed], *the development of which will have less serious adverse environmental consequences*, by the development of alternative energy resources, and by the institution of practices which will conserve energy and reduce demand; and

WHEREAS, The people of California, recognizing the unique quality of their coastline, overwhelmingly approved the establishment of the California Coastal Zone Conservation Commission as a means of protecting their coastal environment; and

WHEREAS, The development of these lands will result in considerable harm to the visual environment and greatly increase the possibility of destruction of the existing underwater ecosystem and marine life in the area; and

WHEREAS, The Legislature has manifested its intent to protect the South Bay area by designating the state lands in that area a protected sanctuary, thereby preventing any new offshore oil drilling; and

WHEREAS, Many [South Bay area] *southern California* cities have already passed resolutions opposing the development of these *offshore* lands *at this time*, among which are the Cities of *Los Angeles*, Manhattan Beach, Redondo Beach, Hermosa Beach, Torrance, Rancho Palos Verdes, Laguna Beach and Santa Monica; [and many environmental groups and interested individuals also oppose such development;] now, therefore, be it

Resolved by the Assembly and Senate of the State of California, jointly, That the Legislature of the State of California opposes the development [of] *at this time of federal* outer continental shelf land *for oil and gas production* in the [Santa Monica Bay area for offshore oil drilling operations] *southern California area;* and be it further

Resolved, That the Congress of the United States is hereby urged to enact legislation designating the outer continental shelf a national preserve to be used for mineral production only in the event of a congressionally declared national emergency; and be it further

Resolved, That the Chief Clerk of the Assembly transmit copies of this resolution to the President and Vice President of the United States, to the Speaker of the House of Representatives, to each Senator and Representative from California in the Congress of the United States, and to the United States Department of the Interior.

Mr. BODOVITZ. I would like to stress two points. one in response to Mr. Ligon's statement that because of long lead time in production of oil from offshore leases, it would be appropriate to sign the leases now and then decide later what should be done with the oil. We think that is 100 percent wrong. The oil under the ground belongs to all the people of the United States. We think the appropriate way to deal with this is to deal with all the ramifications of offshore oil production now, before any leases are signed.

Point two that I would like to stress is, as I think the discussion this morning between Senator Stevens and Mr. Cory makes clear, there is no magic way to develop a plan to deal with all the possible effects of offshore oil production. I hope it is clear that the Coastal Commission, in dealing intensively with energy, does not have any magic answer. We will, however, have some recommendations within a matter of months.

There are nothing but hard decisions ahead here. But the thing that makes planning in regard to the Outer Continental Shelf oil so difficult is that it is impossible to understand what the full ramifications are, on the basis of the information we have received from the Interior Department.

No one can plan adequately, and no one can know what the proper mitigating measures are, or even if the drilling should take place, until you know how, where, when, what the safety procedures would be; what kind of provisions would be made if there were an oil spill; and perhaps as important as everything, where will the oil go? Where will the pipelines be built? What is the impact on the land? How many refineries and where? It seems these matters should be fully discussed before the people can make intelligent judgments.

This absence of information makes our planning extremely difficult.

If there were subsea completions required, some people would find the aesthetic objections removed. It is the uncertainty that makes this so exceedingly difficult to deal with. We would, therefore, like to have your help in a Federal policy.

Senator STEVENS. Isn't that what the environmental impact statement procedure calls for? Have you made such proposals, such as subsea completion to the Interior Department in connection with the environmental impact statement procedure?

Mr. BONOVITZ. It is in everything we have talked to the Interior Department about. Our commission and attorney general of California are suing the Federal Government saying the environmental impact statement should deal with alternative sources of energy rather than only with ways to get oil out of the Outer Continental Shelf.

Senator STEVENS. No one knows until there is a discovery to where the platforms and pipelines will be located. How can you require that in advance of a decision to lease which is a prerequisite for even exploratory drilling. I listened today about giving oil to the oil companies. We don't give oil to the oil companies. The price the Government gets is determined by the price when it is produced.

The oil is owned by the Federal Government and the people, and they have no interest until it is produced. There is no giving away of oil. It is the same procedure offshore as it is on land.

We get a percentage of the value of the oil when it is sold. It is not figured in advance. I watched that shell game in Louisiana. There were people who sought to enjoin the Louisiana development offshore in the Gulf of Louisiana because they said Alaska was a prudent alternative to development of Louisiana.

Do you know who the people were that enjoined the development of Alaskan land? The same people. We have the same problems with the development of coal now, with the strip mining regulations. We have the same problem with nuclear power. We have the same problem with oil. We have the same problem with the geothermal developments.

There is a delay factor associated with each one. Part of the national energy policy is to inventory what resources are available and to provide for the development of those that can be developed in the shortest period of time.

We helped create the concept of coastal zone management. We believe in it. But those comments should be directed from a commission such as yours to the environmental impact statement. That procedure would give us the decision making information required by the Secretary of Interior to decide whether or not to lease at all and if to lease, under what conditions.

But as I gather from the testimony, someone seems to be waiting for the Secretary of Interior to create the suggestions himself. That is not the procedure we outlined. Those suggestions for subsea completions should come from your people.

The suggestions for taking the refineries out of Los Angeles County, for instance, should be made. If we can transport from the North Slope to California, you can transport it without smog.

That is the option. You people should know where the land is available to put refineries which won't cause air pollution. You know the areas such as Santa Barbara where there should be subsea completions which are within the technology today.

We are looking for advice from you and you are saying, "We haven't been consulted." Are we really Alphonse and Gaston on this?

Mr. BONOVITZ. I hope not. What is in the public domain is Mr. Sawhill's statement that the oil is there and the Federal Government intends to get it out. I was glad to hear Mr. Ligon's statement.

Senator STEVENS. Mr. Ligon said consistent with the Coastal Zone Management Act there would be consultation about portions of this statement covered by such a plan. That is not the Outer Continental Shelf. The Outer Continental Shelf only governs the coastal zone to the extent it requires pipelines through the territorial sea and refineries offshore. Those are considerations that require your advice and they are going to seek that, I am sure.

But I didn't understand Mr. Ligon to say the Interior Department will not lease the Outer Continental Shelf until the plan is completed.

Mr. BODOVITZ. Like you, I am sure we will be interested in seeing exactly what was said. I am sure the commission feels strongly it would be inconsistent with what the voters in proposition 20 mandated.

Senator TUNNEY. To show how two people sitting in the same location can draw different impressions of what somebody said, I disagree. I had the impression Mr. Ligon was saying—as far as the FEA is concerned—it would be appropriate to delay any leasing in the Federal lands offshore until such time as the coastal zone plan was completed by the Coastal Management Commission. We will have to take a look at his statement again.

Senator STEVENS. He said it would seem some flexibility in the timing could be negotiated. On the other hand, it should be recognized as significant leadtime.

Senator TUNNEY. That is what he said in this prepared testimony, but I questioned him, and in his answer, he was a bit more specific. But we have a transcript and we will just have to read it.

We will have that excerpt tomorrow. We can at that point make it public.

Senator STEVENS. I have to go to God's country tomorrow.

Senator TUNNEY. So you won't be able to hear it.

Senator STEVENS. I think the comment was made that it might be a doublecross type of thing. I don't think he meant to say, if he did say, but I don't think he did it, that lease sales were not going to take place until the plan took place.

I think he said there would be flexibility. Are you prepared as part of the State commission, to segregate the southern California coast and present a plan within a shorter time frame? Negotiations imply give and take on both sides.

Mr. BODOVITZ. There are many issues raised. So when you say segregate and prepare a partial plan quicker, it is difficult because we are dealing with offshore drilling, supertanker terminals, and many other facets of the energy situation.

Senator TUNNEY. Are you considering the possibility of developing a management scheme on a segmented basis which would include speeding up the Southern California Coastal Management Plan portion and sending it off to Washington?

Mr. BODOVITZ. Our judgment, when this has been raised before, is that, unhappily, it may create more problems than it solves. If we could look at the whole picture we would be able to make better choices. If we say we will not allow drilling here, and the consequence is that there will be a bigger tanker terminal in Morro Bay, then the people in Morro Bay will be unhappy.

It is quicker and better to look at the whole picture, we believe. It seems to us there would be immensely different reactions for a pro-

posal to lease offshore land if, for example, the proposal said we would lease offshore land and we would require subsea completions and that refineries would be sited so as not to add to the smog problem.

Senator STEVENS. But you are asking the Secretary of Interior to make a decision that he should make after the Environmental Impact Statement has been prepared before he even has the advice.

Mr. BODOVITZ. Maybe there is a misunderstanding as to what is intended and proposed. We recognize the problem you pointed out of adequate energy supply. But the shorter way to a solution is to lay these things right on the table.

Senator STEVENS. My people are looking at the lower Cook Inlet, which is probably half as big as Prudhoe Bay, and they read your Los Angeles and San Francisco papers and they are saying, "If California doesn't want to lease their Outer Continental Shelf, why should we?" They are saying, "If they don't want oil, why should we spoil our countryside for it." We are having opposition in the Bristol Bay now, and on the North Slope, we are running into questions. Should we lease more oil land at this time in view of the climate that exists in this country?

If you don't want to lease the oil, why should the country expect Alaska to lease its land and Outer Continental Shelf in the national interest?

Ms. HARRIS. I wonder if it would be possible after you get back to Washington to take another look at my testimony and when you realize I am a member of Mayor Bradley's energy policy committee and what happened during the embargo period was so dramatic—15 percent car pooled.

Here, we have the air-conditioning running and the windows are open. No one is thinking about energy conservation. We go to heated markets now where the heat is on and the doors are open.

No one has incentive to say there should be policies requiring insulation, et cetera. Dr. Doctor has listed them and put them in charts you would treasure.

If you are able to save 20 or 40 percent, half of your battle with the international policy and environment is really answered.

I hope you can investigate that aspect because it gives you more promise than endless search for new productivity and new disruption in a society.

Senator TUNNEY. Wait a second. In the Coastal Zone Management Act, the Congress declared as a policy that all Federal agencies engaging in programs affecting the coastal zone should cooperate and participate with the State and local governments and agencies to effectuate the purpose of its title.

What consultation was there by the Department of the Interior with the California coastal commission with regard to leases?

Mr. BODOVITZ. None prior to the announcement of the proposed leasing.

Senator TUNNEY. So the answer is none?

Mr. BODOVITZ. None prior to the leasing announcement. Subsequently we were invited to take part.

Senator STEVENS. I don't understand that because the announcement is necessary to announce the intentions to start the procedure on the environmental impact statement.

Ms. HARRIS. A courtesy would allow them to say in a few weeks, in advance, that they would be making a statement.

Mr. BODOVITZ. Even the environmental impact statement will take considerable planning for the 3 miles within the State's jurisdiction. I agree with your point about not playing Alphonse and Gaston. Nonetheless that got the thing off on a foot that made it hard to recover for everybody since.

Senator STEVENS. They announced they were going to lease the Gulf of Alaska. We have to consider wind and sea conditions. The Council on Environmental Policy says that area has the biggest environmental risks. We are giving them the reasons. We have the State commission working on other areas of lesser risk. We have tried to say, if you are going to do it, this is the area where we have the least objection. But we didn't take affront in the fact they announced that they would lease it. We will just prevent them from leasing it.

It takes dialog and someone has to start first.

Senator TUNNEY. Do you feel you could get more help from NOAA in your plan and if so, what kind of help?

Ms. HARRIS. I think Mr. Knecht's office has been most helpful in every respect. I feel the questions raised by Dave Freeman and the question I raised in my testimony and something you raised, Mr. Tunney, last night in your interview on Metromedia, perhaps in view of national security we should assume responsibility for that resource we are talking about but do it on standby, ready with subsea stations.

I would like to know if it shouldn't be part of the national defense budget. I would like to know from NOAA if it shouldn't be something to be explored?

I would like to know what is the capability of industry? Industry doesn't want to reveal its capability for fear of offending its major clientele, the oil industry, which does not choose to do anything in a way they don't have to do it if it will cost more.

Somebody said if we were subpenaed we would tell you our capability. But that is a hell of a thing that somebody has to be subpenaed to tell you something to benefit society.

Mr. BODOVITZ. I concur about the good work of Mr. Knecht's office. We have received excellent cooperation from them. The additional help we would like to have is in the form of money. Our commission is in support of the Senate amendment that Senator Tunney mentioned to provide additional funds for the States to help plan for and deal with the impact of proposed Outer Continental Shelf development.

Senator TUNNEY. Well, the thing that is, of course, of great concern to me as just one man, one Senator, is the requirement in the Coastal Zone Management Act that when the management plan for a State is completed, there should be very close cooperation and consultation with State and local governments and with the Coastal Management Commission, and as I read the act, section 307(c)(3), in the case of leasing, says that there be a certification by the Coastal Commission that the lease for offshore drilling is compatible with the plan. This should be effectuated in the case of southern California offshore drilling, and as I say, it does not seem to me that it can be effectuated until such time as the coastal commission plan has not only been drawn up but has also been approved.

It seems this cannot happen until at least 1976. Therefore, there should be a delay until at least 1976 in any leasing by the Interior Department. Now, I suppose there might be disagreement on this panel as to whether or not that would be appropriate, I don't know. But that is my own attitude. I assume that is the attitude of the California Coastal Commission?

Mr. BODOVITZ. Our lawyer suggested that I not practice law and deal with legal questions. That is a valid interpretation of the statute, it seems to me.

Senator TUNNEY. I am thinking of the basic policy.

Mr. BODOVITZ. The policy of the Commission is, irrespective of the Federal law, that leases for production—again we do not object to leases for exploration—but leases for production not be signed until the plan has been completed and acted upon.

Senator TUNNEY. Just for the purposes of whatever enlightenment it can give to us, a reporter took down a quotation from Mr. Ligon and it says, "I am suggesting that there may be some possibility for delay in the lease sale until the coastal management plan is completed, if that is necessary."

I thought he was a little surer in another answer he gave. In another answer he felt it would be appropriate to delay until the plan was completed. We will find out tomorrow. Stay tuned.

Our next witness is a very patient assemblyman, Alan Sieroty.

STATEMENT OF ALAN SIEROTY, CHAIRMAN, CALIFORNIA ASSEMBLY SELECT COMMITTEE ON COASTAL ZONE RESOURCE, CALIFORNIA STATE LEGISLATURE

Mr. SIEROTY. Thank you, Senator Tunney and Senator Stevens and Mr. Hussey. I have enjoyed the hearing very much. I have not minded at all waiting until this time. In fact, it gives me a little more perspective in which to speak.

It may have been better to wait for the next witnesses to speak so I might be able to rebut some of what that witness will probably say.

It is my pleasure and honor to appear before you in the most important deliberation, and I have with me Peter Douglas, the consultant. Nearly 6 months ago, we had a meeting of the Assembly Select Committee on Coastal Zone Resources on the proposed OCS oil and gas activities on the California coastline. We were honored to have representatives of your office and those of Senator Cranston's sit with us at that time.

It was constructive. We sat in this building and received testimony from State and local representatives, from the general public, et cetera. As a result of that hearing, the committee issued a report, copies of which have been supplied to your staff.

Among the things we learned was the fact that Federal officials having primary responsibility for the Pacific coast OCS program were not aware that Congress had passed and the President had signed in October of 1972 the Federal Zone Coastal Management Act. It was obvious Federal officials weren't aware of the responsibilities their agencies might have under that act.

As an expression of national policy, it seemed inconceivable these Federal officials were managing a program planning and I am re-

ferring to that portion of the Federal Coastal Zone Management Act which Bob Knecht referred to, sections 302 and 303.

Congress declared that it is national policy for all agencies engaging in policies affecting the coastal zone to cooperate and participate with State and local governments in effectuating the purposes of this title.

Another lesson, it is difficult to obtain significant, accurate, and clear information as to what the Federal Government plans for OCS are. After considerable effort on the part of our staff, representatives of the Bureau of Land Management agreed to testify. Several weeks earlier, some of the same representatives refused to testify before the Legislators' Joint Committee on Public Domain.

It occurred to me that if it is this difficult for the State legislature to get information on proposed OCS activities, how much more difficult it is for those agencies and officials preparing the coastal zone plan for California.

California's current coastal zone resources plan and management program is probably the most comprehensive program in the country. It was initiated through proposition 20. I feel it is important in terms of the public pronouncement on the vote.

Senator TUNNEY. Any written statement you have will be incorporated into the record.

Mr. SIEROTY. I haven't given your staff a copy of this. These coastal commissions are well into the planning program and have received over $700,000 in Federal assistance. Other forms of Federal support for the California coastal zone management plan are being provided.

The coastal plan being prepared for California contains numerous elements. Since the coastal planning is still in the early stages, there is no way to determine at this time whether Federal OCS activities will be consistent with it.

The process of OCS development should involve effective Federal, State, and local planning for the social, economic, and environmental impact of Federal offshore oil activity. The Federal agencies have not shared in information and management decisions with the State agencies and officials responsible for the State's coastal zone planning and management program.

As significant is the apparent attitude of Federal agencies, the Department of Interior, that this is their responsibility and the States have no role.

This later dynamics of Federal-State relationships with respect to OCS development will be difficult to change. With respect to the informational gap, something can be done. A necessary first step must be a more complete and timely sharing of information, including data regarding the location and magnitude of offshore resource areas, a precise lease and development plan.

Our commission hearing demonstrated the gross inadequacies of informational sharing. We find California is in the process of completing a plan consistent with State and Federal law and State and Federal support while the Federal Government is proceeding with OCS development plans which may negate the State plan.

In an attempt to resolve the conflict, a number of steps at the Federal level should be taken. First, the Federal Government should delay as has been suggested by you, Senator Tunney, lease sales along the Cali-

fornia coast until the California plan has been completed and adopted by the California Coastal Zone Conservation Commission.

The Federal OCS program should be submitted to the coastal zone conservation commission or successor agency for review and approval. The Federal Government should require conditions on any lease sale that the companies must comply with California coastal zone management plan.

This could be accomplished by requiring the oil companies to obtain a permit prior to commencement of any activity. The Federal Government should provide California with information regarding the following: Data regarding the location and magnitude of potential offshore oil; data and plans for OCS development including the number and types of production facilities; the location and modes of transportation systems to bring the oil and gas ashore; the anticipated onshore facilities required to service OCS oil and gas; products such as equipment, construction and assembly facilities, storage facilities, onshore transportation, personnel, supply requirements, refinery needs, and refined product.

The Federal Government should provide support for the plans necessary to propose onshore or offshore impact of OCS development. It should be undertaken jointly by the State and Federal Government and should result in comprehensive State plans to minimize anticipated adverse impact. Prior to Federal lease sales, specified analysis of onshore impact of OCS activities must be shown. The current treatment of the aspects of OCS activities in the environmental impact statement are inadequate and should be greatly expanded.

California should be allowed to nominate OCS areas in which no oil or gas development should be permitted.

The coastal States must be given a meaningful role in the preparation of government and environmental impact statements. The State would have a decisionmaking function in the preparation of and conclusions drawn. A joint State, local, Federal review committee must be established for this purpose.

Such a panel must have more than advisory responsibilities. It should establish some form of revenue shares to compensate State and local governments.

Data and plans for OCS development should be made available to the public to insure meaningful public participation. The public involvement should be encouraged and actively solicited. Prior to new lease sales or OCS development, the Federal Government should prepare and Congress should adopt a comprehensive national energy policy which includes research and development of alternative sources of energy, methods for conservation of energy, programs to reduce growth rate of energy demand, and coordinated approaches to national energy needs concerning all sources of energy.

Regarding the energy policy, we must obviously meet the basic energy needs of our State and Nation. People must be able to get to their jobs, schools, places of recreation, and stores and those places we frequent as a normal part of our lives. We must be able to heat places of work. I believe we can and must meet the energy needs without causing a further deterioration in environmental quality. We must proceed within the framework of a comprehensive energy policy including conservation and energy development and program energy proposals.

It must include energy conservation programs designed to effectuate a reduction in the rate of growth of energy demand. Such a policy should be tied to a balance program that assures wise long-range planning and management policies for the use of previous resources such as those in the coastal zone.

We do not have currently any sort of national energy policy that balances the needs of conservation and development of energy resources. Although the Federal Energy Administration hopes to have complete work on the national energy policy sometime in the next month to two, many important steps toward OCS development, for example, the Government environmental impact statement, will have been taken.

This puts the cart before the horse. What is the need for California offshore oil drilling? We must ask whether or not we need to develop the OCA along the California coastline at all. In any event, if there is no national energy policy, I believe we can legitimately ask why should California endure adverse impact from oil and gas development at this time when the need for such development has not been adequately demonstrated.

The inflow of the Alaskan oil talked about today, coupled with other projected sources of energy will exceed California's refining capacity of approximately 2.25 million barrels a day by 1980. Therefore, we may see oil glut on the west coast.

The oil companies are already talking about diverting Alaskan oil to Japan, of building a pipeline to the Midwest refineries.

Another major determining need will be the governmental position relating to implementation of energy measures. Rand estimated that conservation measures such as industrial, thermal management programs, et cetera, can save up to 710,000 barrels of oil a day in California alone. If the Government were to move forward with those types of programs, there would be no need for any new offshore oil and gas development.

In general, both the State and Federal Governments should institute thorough reevaluation and analysis of the way we manage publicly owned natural resources. Now, I would like to make a few more comments before I conclude, some of which are the result of discussions here today.

Frankly, gentlemen, I am greatly disturbed by what has been happening by our Federal Government in recent months. I think the Federal Congress, as I think about this in terms of our constitutional system, the Federal Congress has delegated too great powers to the executive department in relation to the exploitation of this natural resource when it concerns some other vital aspect of our lives. This is a gigantic decision, what happens out here off the southern California coast. It is a decision in terms of national relations and concerns the live of at least 10 million Californians.

It is related to the whole energy policy of this country. To allow the Department of Interior to proceed the way it is, just smacks of failure on the part of our constitutional system to provide the protection and balance when such an important decision is to be made.

I think the Congress should take back some of its authority in this area and review the authority you have given to the executive department and to try to reexamine this so that more of these decisions can be made by people who have responsibilities to the public.

I think you gentlemen, Senator Tunney and Senator Cranston in particular, have a tremendous responsibility here to begin to take another look at the kind of delegation of authority which the Congress has given to the executive department in this area.

This Project Independence business is being used as an excuse to move ahead rapidly, hastily in a way which I have never seen Federal agencies move before, absent a war situation.

Inadequate time has been given for the discussion of issues, examination of the environment, and other kinds of impact. This is a decision that will affect people of our area for 40, 50, or more years. I think it is critical that this process be slowed down and looked at in a rational manner which we expect our Government to follow.

A lot here relates to the credibility of our Government. As you know, in the last year or two, this has become a major issue. It seems to me that the question of whether the oil companies are going to control our resources, our environment, is right here at stake or whether the people will be able to control the decisionmaking process.

I might point out something to you which, perhaps, has some relation to your responsibility in the U.S. Senate, which may not be directly related to this, but I think it bears some relationship to it.

You are aware of the petition drive which brought several hundred thousand signatures of people frequenting the southern California beach over the Labor Day weekend. In an attempt to encourage people to come to the beaches and sign the petition, the organization and people involved in that project attempted to place advertisements on radio. Several radio stations refused to carry those advertisements. Their reasoning was that those decisions were made at the national network level. All the stations are owned by companies which also own television stations.

They considered this advertisement controversial. Let's look at this in some context here. You are aware that the international oil companies are carrying out extensive television campaigns to convince the people that oil is good for you. Oil is good for the environment.

You see the spots on national programs and local spots on television stations. At the same time, people who want to try to point out that oil is not always so good are unable to purchase advertisements on these same stations.

It seems it is time for you who have duties in regard to regulation of Federal communication activities to take a look and see if these practices are in the best interests of the public.

Should there not be opportunity for people to go through the public media to petition Congress to redress grievances? To have freedom of speech and freedom of press? To allow views to be heard that may be different from views heard by other people advertising in the media? It relates directly to what we are talking about. The oil companies have tremendous economic and political power in this Nation.

Let's not deny it. How many millions of dollars went to President Nixon's campaign directly from the oil companies? It is related directly to what you do here because the people have no belief that the executive department, the President, and Department of Interior, will operate in the best interests of the people.

It is up to Congress to take back the authority and operate in the best interests of the people.

Senator Stevens, I know you are concerned about Alaska doing something and California not doing something. I am just as concerned about the international aspects of the Arab oil. I want to point out a few things.

First of all, 3 miles off the California coast is within the Santa Monica Bay. Our offshore islands are 27 miles offshore. We are talking about oil in our bay, in a bay in which 7 million people of Los Angeles County frequent as a major recreational area. This is the most populated area where oil has ever been expected to b drawn.

It is different from the situation in Alaska, although that doesn't mean to say I approve of drilling in Alaska, but I want to point out there is tremendous impact in terms of population, property values, recreational values, and many other things which may not be present in Alaska. I am urging you to delay, to review, to start thinking about this in the context of our national energy policy, about conservation.

What are you doing, for instance, gentlemen—and I know it was suggested the other day, Senator Muskie—about the automobile. How will we get cars that produce 20 to 25 miles to a gallon instead of 8 or 10 miles to the gallon.

With all that oil, we would not need the offshore drilling. That is just one aspect in which we can save gasoline and petroleum. If you are going to go ahead, then Congress should get into the act and look at other aspects of this which we have no assurance that the Department of Interior is going to look at.

We have earthquake conditions on the west coast, the problem of spills. What about underwater installations? We have no assurance if there would be installations that they would be subsea stations. We have received no kind of assurance from the Department of Interior. Yet, they say they will lease in May.

What kind of business is that? They are waiting for the environmental impact statement and they will review these things and they will lease in May. If it doesn't tell you that the decision has been made, how can you expect the citizens to believe in this? What about the questions of absolute liability? In Alaska, Congress provided for absolute liability for any damage. What about that for the citizens of California?

What about the question of economics which Mr. Cory tried to raise? The value of crude oil has tripled in value since prior leases and, yet, we are still talking about a system which goes for bonus bid and then some kind of royalty. This may not be the best method because of the economic situation. It has changed dramatically. I suggest it be reviewed again by Congress.

I think we need to find a way where the public interest is protected. The cost of drilling has not gone up to the same magnitude the crude oil price has gone up. You have a whole new system here.

The whole question of posted prices as Senator Stevens mentioned—you ought to know on the west coast and Los Angeles basin, these are controlled by the major oil companies. I have asked the U.S. Justice Department to bring a trust action against the oil companies.

Our prices are considerably lower than in Louisiana. Why? Because there is a price monopoly situation in this area. The State of Cali-

fornia has lost billions of dollars on this and the Federal Government will lose millions of dollars if you do not correct the situation.

These are some of the things I have been thinking about as I sat here. I think it is a time for leadership to improve the quality of life and not simply to lead to the deterioration of our quality of life. We are being asked to sit back and allow the Federal Government to desecrate this area of this country because for some reason, we need to have more oil, as if that is the only factor to consider.

There is more to consider and I ask you gentlemen to think ahead, think ahead and provide the kind of leadership that your constituents elected you to provide.

Thank you very much.

Senator TUNNEY. Thank you, Assemblyman Sieroty. It is clear to me that you have spent a great deal of time considering these issues and you are most knowledgeable of the matter to which you have addressed yourself.

Your statement will—the statement of the committee that you are chairman of will be included in the record.

Senator TUNNEY. We are running short on time. I could think of perhaps 50 or 60 questions I would like to ask you, but we don't have the time. Maybe upon consideration of your testimony as it relates to the specific responsibilities of the State to cooperate with the Federal Government, we may address questions to you in writing.

I think we ought to push on. Do you have any questions you would like to ask?

Senator STEVENS. No. I think he said a great deal in 10 minutes.

Senator TUNNEY. I think that was a slow time.

Senator STEVENS. It was a very efficient use of his time. I would not ask any questions. I, too, understand the timeframe. I would invite your attention to S. 3221, which passed the Senate last week, and calls for increased production of Outer Continental Shelf energy resources. It declares the Outer Continental Shelf a vital national resource reserve which should be made available for orderly development. It states, as a policy of the United States, that the Outer Continental Shelf land is a geologically favorable source of petroleum and capable of supporting oil and gas development without undue environmental hazard.

We could have a lively and interesting discussion, I think, even with the audience obviously supporting your point of view.

I want you to know I disagree with many of the things you said. I think there is a lot more going on in Washington than you know and perhaps if we had the time, we could share some of the things going on with you.

I have no specific questions. I noted your report and your comments about sharing of the Outer Continental Shelf returns with adjacent States. The reason why I voted against the bill was because it didn't adequately share such returns.

Mr. SIEROTY. I don't think the coastal States ought to be bought off either, although I think they have significant problems which they should be helped to solve. I only wanted to indicate to you, Senator, and Senator Tunney, the concerns which I have and which I think represent the concerns that most of the people have. We view the Fed-

eral Government here in a way I know you don't want to be viewed.

I am in government, too. I think you must sense out of this meeting here today the kind of lack of confidence, lack of communication, lack of real regard for the Federal Government activities thus far.

You and I are supposed to represent the people of this country and yet, the people of this country really are not very happy about what their Government has been doing recently.

Senator STEVENS. Let me comment. You say you are not getting enough free oil. Alaska is selling its oil today to California for $5 a barrel. You are selling your own oil to yourselves for $22 a barrel. I can tell you about one of your sales.

It was a Long Beach sale. You sold royalty oil at $22 a barrel.

Mr. SIEROTY. But the oil companies were paying $3 a barrel.

Senator STEVENS. I don't think the price of oil should be allowed to rise. I voted it down. I don't support the comments that price should be used as a mechanism to control consumption. That hurts the people who support it least. It allows the Arabs to set the oil prices. I don't believe it is consistent with the national interest.

You are complaining about the amount you are getting for oil. That is your business. I can tell you that the U.S. Congress has a responsibility to try to hold the prices down, not make them go up. I agree with what the people have said concerning the conservation ethic. We should learn it and foster it. We did mandate that cars to be constructed by Detroit in the next 2 years must have an increased gas consumption.

But the demand for clean air standards came primarily from this area, and they increased the consumption of gas nearly 100 percent in a 2-year period. They reduced the mileage on automobiles from 15 miles to a gallon to 7 in 2 years.

Mr. SIEROTY. There may be a slight decrease. Cars have increased in size.

Senator STEVENS. In terms of clear air standards, it is true, the things we have mandated have caused some of the problems. We mandated them in response to popular demand. Clean air standards, I support. You say we are not taking care of the problems. I think Congress is trying to respond to a myriad of demands. If you would like to come with me to a hearing in the Midwest—it was the Midwest that tried to knock out of this bill any provision for money to the coastal States. They called it a rip-off. They said the money belongs to all of the people and the coastal States are not entitled to a dime.

We try to represent the viewpoint of the whole Nation. You do a good job of representing your people, but I have come a long way to sit and listen to your views, and I have been very patient with some of them.

Senator TUNNEY. Just one point that Senator Stevens raised about the amendments to the Outer Continental Shelf Lands Act that passed last week. He quoted from some of the language in the legislation which asserted that the Outer Continental Shelf was a national resource and that it should be developed as a national resource. There was also in that legislation some statements of policy findings which I think the record would be incomplete without and they are: One, it is the national policy to preserve, protect, and develop the resources

of the Nation's coastal zone and provide for the orderly siting of energy facilities therein; second, the development, processing and distribution of oil and gas resources of the Outer Continental Shelf and siting of relating energy facilities may cause adverse impacts on the coastal zones of various coastal States; and, three, the Coastal Zone Management Act of 1972 provides policies, procedures, and programs designed to anticipate such adverse impacts and prevent them by appropriate planning and management of land and water resources in the coastal zone.

This leads me to believe this was a clear finding on the part of Congress that there has got to be far greater cooperation between the State, local governments, and the Federal Government in the future than there has been in the past, as it relates to OCS leasing programs.

I think that is an important supplement to the point Senator Stevens was making with respect to the findings and the policy directions of this bill that did pass last week.

Mr. SIEROTY. Thank you very much, Senator.

Senator TUNNEY. Thank you very much.

[The report referred to follows:]

BACKGROUND

On April 9, 1974, the Assembly Select Committee on Coastal Zone Resources held a hearing in the Santa Monica Civic Auditorium dealing with the subject of "Offshore Oil Drilling." Twenty witnesses presented testimony. Questions, prepared by Committee staff, had been sent to most witnesses (see Appendix C) and served as a point of departure for the hearing. The session was well attended and received media coverage.

The Committee's principal areas of concern that emerged from the hearing included:

The status of both state and federal offshore oil and gas development activities on the California Coast.

The specific offshore areas along Southern California's coastline being considered for oil and gas development.

The need for accelerated offshore oil and gas development at this time.

The impacts of offshore oil and gas development on onshore land uses for refineries, tanker terminals, storage tanks and pipelines, on the environment, and on California's coastal zone resources planning and management program.

The status of subsurface production technology that could minimize visual impacts of offshore oil and gas development activities.

The status of technology to prevent oil spills, and, in the event of a spill, for containment and clean-up.

The context (i.e. energy policy) in which offshore oil development activities are being considered.

The offshore oil and gas development practices of state and federal agencies as they relate to maximizing the public's economic return and assuring reliability and safety.

The degree to which meaningful public participation in the decision making process is being encouraged and provided.

The Committee's hearing stemmed from a request in December 1973 by the Bureau of Land Management (BLM), U.S. Interior Department, for nominations by the oil industry of areas off the Southern California coast that should be offered for lease. The BLM's request resulted from a policy decision made by President Nixon in April, 1973, that 10,000,000 acres of outer continental shelf (OCS) in 1975 and again in 1976 should be leased to private industry for oil and gas development. The BLM's request for nominations of Southern California offshore lease areas covered approximately 7.7 million acres beyond the 3 mile limit of State jurisdiction. Not all of this OCS area will be leased.

Testimony indicated that after the nominations have been made, the BLM, in this larger nominating area should be leased. As of mid-April, 1974, no decision consultation with other federal agencies, will decide which specific tracts within

with regard to specific tracts had been made. When specific tracts have been selected, the BLM issues leases pursuant to federal regulations and procedures. At that point the United States Geological Survey (USGS) takes over and grants development permits and monitors construction and production operations. The USGS has responsibility for collecting revenues from OCS production. A number of other federal agencies, such as the Army Corps of Engineers and the U.S. Coast Guard, share responsibilities for various aspects of offshore oil and gas development activities.

Environmental impact statements are required at both the lease issuing and development permit stages of the process.

In early 1969, the State Lands Commission imposed a moratorium on the drilling of new wells or the issuance of new leases on state-owned submerged lands pending the revision of its procedures regulating offshore oil and gas development. On December 11, 1973 this moratorium was lifted by the State Lands Commission. Permit applications for the drilling of new wells from *existing* platforms are currently being received and processed.

Witnesses representing governmental agencies, conservation and civic groups, and various other segments of the public presented testimony on a wide range of issues. This report deals only with those issues which were of principal concern to the Committee at the hearing and with respect to which sufficient evidence was presented to allow findings and recommendations to be made. The complete hearing transcript is available from the committee. Copies have been distributed to California libraries in order to maximize their availability to the public at minimum expense.

Summary of Findings

I

The Interior Department's accelerated OCS oil and gas development program is based on an unrealistic policy of self-sufficiency ("Project Independence") by 1980 to 1985 and does not appear to result from a comprehensive balanced energy policy of conservation and development.

II

President Nixon's decision that 10 million acres of OCS per year (1975 and 1976) should be leased by the Federal Government for oil and gas development does not appear to have been based on a thorough analysis of the total availability, from all sources, of oil and gas resources.

III

In view of the anticipated inflow into California of Alaskan north slope oil and the apparent reduction in the rate of demand increase, the need for offshore oil and gas development along Southern California's coastline, at this time, has not been established.

IV

It has not been demonstrated that the development of any OCS lands adjacent to California's coast is necessary to meet future energy needs that cannot be met by development of other sources of oil and gas, by development of alternative energy resources, *and* by the institution of energy demand reducing conservation policies.

V

Governmental agencies, at all levels, responsible for the management of the public's offshore oil and gas resources do not have independent information as to the location, quantity, and quality of offshore oil resources necessary to promulgate wise long range conservation and development policies, and to make rational management decisions.

VI

Although there is evidence that some industry-generated information regarding the location, quantity, and quality of some offshore oil resources exists, it is most often the secret information of the oil industry or is held as confidential information in government files and is therefore not available for public analysis and comment. Under these circumstances, governmental agencies are often not able to make informed short or long-term management decisions, and the public is

effectively precluded from meaningful participation in the decision making process. As a result, the public has no way of knowing whether new OCS oil and gas development is in the public's best interest when weighed against, among other things, the environmental impacts of such development the consequences of which the public must bear.

VII

It is likely that in the early 1980's the inflow of oil to California from sources other than new OCS oil production will exceed this State's refinery capacities.

VIII

There is great public concern over the possible development of offshore oil and gas resources. The following factors were most often expressed as the basis for this concern:

The risk of oil spills and, if they occur, their adverse impacts on the marine environment, recreational opportunities, and on recreation and tourist-dependent businesses.

The adverse aesthetic, visual impact of offshore drilling platforms.

The onshore impacts of offshore oil and gas development such as pipelines, storage tanks, transportation terminals, expanded refinery capacities, and other support facilities and services.

The development of offshore oil and gas in the absence of an overall energy policy that includes energy conservation and development of alternative energy sources.

The compatibility or incompatibility, and cooordination, or lack thereof, of offshore development activities with state, regional, and local coastal zone planning currently being carried out pursuant to Proposition 20, the California Coastal Zone Conservation Act of 1972.

The adequacy of current technology to guarantee against oil spills or to contain spills, if they occur, under most weather conditions.

The adequacy of existing regulations to protect environmental quality, public and private property, and the health and safety of workers and the public.

The adequacy of existing financial responsibility laws to make good any damages sustained by the public or private sector as a result of environmental pollution resulting from offshore activities.

IX

There appears to have been very little effort made by responsible federal agencies to obtain input from the general public, or from State and local governmental bodies.

X

There is little or no awareness on the part of the BLM or the USGS of the federal Coastal Zone Management Act of 1972 and their responsibilities thereunder.

XI

There is no effective coordination between the federal agencies responsible for leasing OCS lands and the California Coastal Zone Conservation Commission which is under a mandate from California voters to prepare a comprehensive coastal zone plan for the balanced conservation and use of California's coastal resources, including oil and gas.

XII

It appears the "energy crisis" is being used to justify an accelerated OCS development program which to date has not, and, unless the program is subjected to a major reorientation, will not give adequate consideration to impacts on the environment, land use planning, long-term economic and energy resource development, and on nonquantifiable social variables such as attitudes toward energy consumption. These considerations were rarely mentioned as having a role in the process of deciding whether OCS oil and gas development offshore Southern California should be pursued.

XIII

In the absence of an adequate buffer zone there exists the posibility that federal OCS oil and gas production adjacent to State offshore sanctuaries will result in State reserves being drained and the State opening up these sanctuaries to avoid loss of State oil and gas resources.

XIV

Present state and federaloffshore oil and gas development practices are not designed to maximize economic returns to the public and do not provide adequate protection of the public interest.

XV

Currently there is insufficient environmental baseline data to permit an accurate assessment and measurement of any changes that may occur in the environment as a result of OCS oil and gas development activities.

XVI

The status of subsurface completion technology for oil and gas development is such that in the near future such systems can be used wherever offshore oil and gas production is permitted within sight of coastal areas.

SUMMARY OF RECOMMENDATIONS

I

Offshore oil and gas development in Southern California should not proceed until a comprehensive national energy policy has been promulgated which includes research and development of alternative sources of energy, methods for the conservation of energy, and programs to reduce the growth rate of energy demand.

II

The Interior Department should submit its proposed OCS oil and gas development program to the California Coastal Zone Conservation Commission and other appropriate state agencies for their review and approval before any new leases are issued. This review by the California Coastal Zone Conservation Commission is consistent with the spirit of the federal Coastal Zone Management Act of 1972 and if not provided it should be required by appropriated amendment of the federal Act.

III

Federal OCS leasing and management practices should be reviewed and revised to assure, among other things:

(1) That OCS oil and gas development is carried out as an integral part of an overall, balanced energy conservation and development program.

(2) That opportunities for extensive and effective input is assured the general public, interested units of state, regional, and local government, and other segments of the communities most immediately effected by OCS development activities.

(3) That stringent regulations are developed that require use of the latest, adequately tested technology for oil and gas production to protect against environmental pollution and visual degradation and which include the power to set high performance standards which the industry must meet. For example, subsurface production systems that meet rigid safety and reliability standards should be required wherever offshore oil and gas development is permitted within sight of any adjacent shoreline area. These regulations must also provide protection for the safety of the workers and the general public, by, among other things, requiring the industry to meet certain personnel training standards and by establishing effective inspection procedures.

(4) That fully adequately funding support and independent expertise be provided the responsible federal agencies so that they can maximize effective management of OCS oil and gas development activities.

(5) That federal OCS activities are compatible with and provide maximum consideration of the adjacent state's interests as manifested by its policies and programs for the management of its coastal zone recources.

IV

Federal OCS development activities adjacent to State marine sanctuaries should be prohibited unless an adequately large buffer zone is set aside to prevent drainage of State oil and gas reserves. The size of the buffer zone must be

based on accurate information as to the location and extent of offshore oil deposits. If this information is not available to the government it should be provided by the industry as a pre-condition to the consideration of lease bids in order to permit an informed decision on the adequacy of buffer zones.

V

The state and federal governments should cooperate in the conduct of environmental baseline studies in any offshore area for which development leases are being sought before such leases are issued. Such studies must be based on a systematic approach that recognizes and takes into consideration the variability of environmental factors. The studies must be adequately funded and ongoing in order to maximize data validity in measuring and protecting environmental quality. The studies should be conducted by a governmental agency with expertise in marine sciences, such as the National Oceanic and Atmospheric Administration, and should be subjected to independent review. And finally, such studies should be carried out on a continuing basis after oil and gas development proceeds in order to enhance the accuracy and usefulness of the information for application in future offshore and gas management decisions.

VI

The State of California should undertake an indepth analysis and review of the role of the private and public sectors in the development of state and national offshore natural resources. The Rand Study on energy currently being conducted for the Assembly's Committee on Planning, Land Use, and Energy should be expanded to encompass a public policy analysis that would explore governmental policies bearing on the development of publicly owned mineral resources on public lands. The study should take account of both public needs and potential economic returns to the State. In this respect the expanded study should suggest and analyze alternative approaches for governmental action.

VII

Before new offshore oil and gas development is permitted to proceed a comprehensive analysis should be conducted to determine the need for offshore California oil production in light of the anticipated inflow to California of oil and other forms of energy from all other sources, including onshore oil production, Alaskan north slope oil and gas production, and foreign oil and gas imports, and in view of California's projected capacities to refine and store the anticipated inflow of oil from sources other than new offshore production. There exists the possibility that California may become an "exporter" of oil given current projections regarding reductions in the rate of demand increases, the large quantities of anticipated north slope oil coming to California, and in view of the fact some foreign imports will most likely continue. It may be in the best interest of the State and nation to measure California's offshore oil and gas resources and hold them as reserves. In any event, it would appear contrary to wise, long-range energy planning and management policies to rush into offshore oil production in the absence of this information.

VIII

No new federal OCS oil and gas development leases should be issued by the Interior Department until one, five, and ten year plans for such oil and gas production and its impact on California's coastal zone have been prepared and made available to the public (e.g. how many platforms will be built, and where; where would the oil be refined and would additional refinery capacity be required; where would the pipelines, if any, be located; what other onshore support facilities would be required and where would they be located; etc.).

IX

A portion of the Federal revenues from OCS oil and gas production should be made available to California to assist it and local governments in insuring that measures are taken to mitigate against any environmental damage, and to assist in planning for the impact of this production on the State (e.g. planning for needed transportation terminals, additional refineries, pipelines and storage areas, and other support facilities).

X

If OCS oil and gas production is permitted, offshore construction, development of related onshore facilities, and petroleum-related operations should be unitized to the maximum extent possible. Such cooperative sharing by more than one company should apply to all types of offshore platforms, subsurface production systems, transportation facilities and rights-of-way, and storage facilities whenever technically and economically feasible.

XI

All exploratory and production data should be submitted to the appropriate State agency (i.e. the Division of Oil and Gas) and should be made public no later than one year from the date on which it was compiled.

Senator TUNNEY. We now have representatives of Western Oil & Gas Association. There will be four men appearing as a panel; Richard L. Manning, Sherman Clarke, Gordon Anderson, and Stark Fox. It is my understanding, gentlemen, you are prepared to limit your initial statements to 5 minutes each with the understanding any of you can submit a further statement for the record.

Please proceed.

STATEMENT OF RICHARD L. MANNING, ASSISTANT TO THE GENERAL MANAGER, WESTERN OIL & GAS ASSOCIATION; ACCOMPANIED BY SHERMAN CLARKE, CONSULTANT, WESTERN OIL & GAS ASSOCIATION; GORDON ANDERSON, PRESIDENT, SANTA FE DRILLING CO.; AND STARK FOX, INDEPENDENT OIL & GAS PRODUCERS OF CALIFORNIA

Mr. MANNING. We appreciate the opportunity to be here today. We had not intended to appear as a panel but I think at least two of the members up here are not testifying for Western Oil & Gas but for their company and association. However, I think in being helpful in terms of time, this may be a way to go.

Senator TUNNEY. Feel free to make your statements, of course, independent of one another. We did have on our witness list, Mr. Clarke, who was to be the person representing the Western Gas & Oil Association and we were planning to give him 10 or 15 minutes but if we have that for everybody, that will push us back timewise. So, if you will limit your initial statements to 5 minutes, that would be a rule of thumb.

Please try to recognize we didn't anticipate there would be four witnesses. We were anticipating one.

Mr MANNING. My name is Richard L. Manning, and I am assistant to the general manager of Western Oil & Gas Association. Western Oil & Gas Association is a regional oil industry trade association. We have about 100 members varying in size from small independent operators to integrated large oil companies.

Our membership includes producers, manufacturers, and wholesale marketers of petroleum and its products. Our area includes Alaska, where we operate as Alaska Oil & Gas Association, Arizona, California, Hawaii, Nevada, Oregon, and Washington.

We want to emphasize at this hearing today our deep concern for the environment of this area, both offshore and upland. I will tell you during the next few minutes what we at Western Oil & Gas Asso-

ciation are doing on behalf of and with the assistance of interested companies to prepare what we call an environmental assessment of the southern California Outer Continental Shelf area.

This is the area the Bureau of Land Management of the Department of the Interior has announced its intention to offer up to 1.6 million acres for lease offshore of southern California subject to its procedures including publication of a draft environmental impact statement, a public hearing on that draft, and publication of a final environmental impact statement.

It should be pointed out that this entire project would not be under consideration if there were not a domestic energy supply problem.

In a few moments, Mr. Sherman Clarke, an economist and consultant to Western Oil & Gas Association, will present a statement covering in detail supply and demand projections affecting the west coast and United States.

We feel it so our industry's responsibility to do everything possible and to demonstrate to the thinking public that the offshore area can be developed and the environment safeguarded at the same time:

Here is what we are doing to get ready:

1. Publishing an environmental assessment to be available to all the public including the Bureau of Land Management early next month. This document which I will outline will run more than 2,000 pages and be printed in three volumes plus an appendix.

2. Informing interested persons and groups of the results of this assessment so that they may speak knowingly on hearing of the draft environmental impact statement to be held by the Bureau of Land Management.

It is a modeling of what we think the procedure should be offshore and the environmental problems and what to do with them.

We set up an industry study and work group made up of about 50 experts in the fields of exploration, production, transportation, environments, and containment and cleanup offshore, and economics. Subcommittees were created, and a steering committee was made up of chairmen of each of the subcommittees.

WOGA's geologists have concluded that it is reasonable to believe that 6 billion to 19 billion barrels of oil may be found and eventually produced from the sale area. For production purposes, these geologists have estimated that a most reasonable figure of 14 billion barrels may be recovered.

The 14 billion barrels should be found in 4 oilfields containing 1 billion barrels or more; 8 oilfields containing between 500 million and 1 billion barrels; and 14 oilfields of 100 to 500 million reserve.

Natural gas should be produced along with the oil in the ratio of 2,000 cubic feet per barrel. Accordingly, natural gas reserves are estimated to be 28 trillion cubic feet.

It is estimated that the first production will arrive at California refineries in 1979, and the first significant production of 270,000 barrels per day should occur in 1981. Peak production from early development is predicted in 1987, when more than three-quarter million barrels per day are expected. The latter production rate should be sustained and perhaps even increased to approximately 1 million barrels per day as a consequence of oil well completions in the very deep waters of the sale area.

All of this development, of course, would take place over a period of 70 to 75 years.

The first system of transportation would consist of pipelines carrying both oil and gas from the 24 platforms described above to onshore gathering facilities. Such has been the historical pattern for platforms currently operating off southern California.

The other principal kind of transportation arrangement would be floating facilities to accommodate deepwater production. In this case, tankers capable of loading 100,000 barrels of crude would be used for oil transportation and LNG modules constructed aboard ships or barges would be used for natural gas.

If exploration should be eminently successful in the remote regions of the sale area, deepwater pipelines would be installed and an onshore terminal would be needed to receive these hydrocarbons probably in Ventura County.

All of the work and estimates made by the committees have been for the purpose of providing guidelines and basic information for the members of the Environmental Subcommittee to consider in their appraisal of the kinds of environmental consequences which will likely occur from operations.

Our Environmental Subcommittee has retained the consulting engineering firm of Dames & Moore, an organization skilled in assessing estimates of environmental impacts and describing alternatives which might be contemplated.

It is the responsibility of Dames & Moore to outline all of the possibilities for environmental damage flowing from these operations and to provide us with a comprehensive description of these impacts.

In order to furnish Dames & Moore with broad information and significant detail for their studies, WOGA has retained a number of other consultants skilled in particular disciplines. We have hired Dr. Frank Hester to report upon the fish and mammal life found in the sale area, and a group has been hired to catalog all of the birdlife within the area. Of particular importance is the disposition and behavior of an oilspill, should it occur as a result of operations in the area and WOGA has hired a firm to make studies of the probable trajectories of such a spill.

We also recognize that there may be important emissions to the atmosphere from power sources used in connection with the operations and to estimate the effects of these emissions we have retained a meteorological firm to make appropriate studies.

We have another group working on development of the latest technology in the manufacture of booms and skimmers and training of personnel to be able to contain and clean up an oilspill in the unlikely event there should be one.

In fact, last July our board of directors adopted the following resolution:

That member companies of WOGA agree that the most modern technology available to contain and clean up oil spills in the ocean will be made available for use in all operations on leases granted at the 1975 lease sale offshore of Southern California, and the companies will continue to work on improvement of present technology.

In closing, I would like to submit to the committee two additional items. The first is a recent article by Ernest Conine, a member of the Los Angeles Times editorial board. In this particular article by Mr.

Conine he discusses some of the alternatives the United States has in relationship to the Arab countries. I submit this so you can read this at your leisure but let me quote his concluding paragraph:

One thing is sure. If things go on as they are, dependence on the Arab-run oil cartel will grow, prices of gasoline and everything else will climb higher—and the jobs and prosperity of every American will become more vulnerable with every passing month to another Arab oil embargo.

The second item I have for your committee is a document prepared by Western Oil & Gas Association in which we have analyzed statements made by the Seashore Environmental Alliance in their recent newsletters. In this document we comment on their statements. I think the committee will find this document of interest as it sets forth the salient views of the opponents of the proposed southern California lease sale and contains the industry's response to these criticisms.

[The attachments follow:]

[From the Los Angeles Times, Sept. 18, 1974]

WHAT CAN OIL-CONSUMING NATIONS DO TO PRESSURE ARAB PRODUCERS?

(By Ernest Conine)

How does the prospect of paying 80 cents a gallon for gasoline grab you? If President Ford's thinly veiled warning to the oil-rich Middle Eastern countries in his speech to the United Nations is to be effective, it is not an idle question.

The bald fact is that no amount of wisdom emanating from next week's economic summit is really going to bring inflation under control as long as the Arab-dominated oil cartel keeps world petroleum prices at their current outrageous levels.

Unfortunately, the 13 member-nations of the Organization of Petroleum Exporting Countries are not impressed. In the past 18 months they have forced a quadrupling of world oil prices. Last week they agreed on a 5% increase in oil taxes—an increase that inevitably will be passed on to consumers. And they are talking about a hefty new price increase in January.

If this frame of mind persists, the whole structure of international economic relationships that have been built up since World War II will be threatened with collapse as one industrialized country after another scrambles to protect itself from a politically explosive deterioration in the living standards of its people.

Paradoxically, in the view of a large body of government experts, the only way to force down the price of Arab oil is to bring up the price to American consumers. And on close examination the logic is not so topsy-turvy as it first appears.

For a time Washington hoped that Saudi Arabia, whose officials talked in favor of lower prices, would use its leverage to force the cartel price of oil down by perhaps $2.50 or $3 below the present level of some $10 a barrel. It now seems clear that this will not happen.

Thus pressures have been growing for the Administration to assert itself more forcefully than it has until now. Mr. Ford's speech to the U.N. General Assembly Wednesday suggested that he is now prepared to do so.

Not too subtly, he warned the Arabs that they cannot expect to use oil as a weapon of political and economic extortion, threatening entire nations with bankruptcy, without provoking counteraction from the United States and other consuming countries.

In the view of many people inside and outside the government, Mr. Ford's warning was overdue. But what leverage do we actually have?

The uncomfortable answer is: not very much. The President hinted at the possible use of food as a weapon. The Arab countries are big grain-importing nations, but they could buy what they needed from elsewhere—possibly even from the Soviet Union, which would in turn buy it from the United States.

We could cut off projected exports of plants and equipment to the cartel member-countries, but that would only mean that we would continue buying their

over-priced oil without generating any partly compensating business for ourselves to ease the economic burden.

An embargo could be imposed on arms sales to Iran, Saudi Arabia and other countries, or they could be threatened with a simple refusal to guarantee the safety of their massive deposit in U.S. and European banks. But the requisite unity does not exist among consuming nations to make such a threat credible; support from our allies would not be forthcoming.

Washington could threaten to withdraw its good offices from the effort to achieve a settlement with Israel satisfactory to the Arab states, but the danger of a wider war involving the United States is too real to permit such brinksmanship.

Which brings us back to 80-cent-per-gallon gasoline. In the view of many experts inside and outside the government, the only real leverage we have on Middle Eastern oil producers is to cut back our imports and make it clear that we are dead serious about Project Independence.

Once that point was made, the cartel's rigging of oil prices would come under growing strain as mounting world surpluses of producible petroleum increased pressure for competitive price cuts.

Obviously, however, domestic U.S. oil production cannot be stepped up rapidly enough to avoid a steadily increasing dependence on Middle Eastern oil if demand keeps growing. Thus, the first necessity is a dramatic reduction in the amount of gasoline and other petroleum products that Americans use. And the only practical way of bringing about such a reduction is through joltingly higher prices.

Two strategies are being bandied about. One is to increase the gasoline tax 10 to 20 cents per gallon, with partly offsetting reductions in income taxes. The other is to remove price controls on oil produced from so-called "old" wells in this country—letting the price drift upward. A side benefit of such a move would be a substantial increase in the domestic oil reserves that can be economically exploited.

Some combination of the two approaches is likely to be proposed in the Project Independence energy blueprint that will be presented to President Ford in November. Both, obviously, are political dynamite at a time when the American people are already suffering so much from inflation.

The strategy of conservation through higher taxes and/or higher prices indeed shouldn't be accepted unless the experts can make a nearly air-tight case that it will achieve the stated goals: effective pressure on the Arabs and progress toward greater U.S. self-sufficiency.

Even if the case can be made, it will take an awfully brave and persuasive President to sell Congress and the people on a proposal that will, at least temporarily, lower the living standards of Americans even further.

One thing is sure. If things go on as they are, dependence on the Arab-run oil cartel will grow, prices of gasoline and everything else will climb even higher—and the jobs and prosperity of every American will become more vulnerable with every passing month to another Arab oil embargo.

WESTERN OIL AND GAS ASSOCIATION,
Los Angeles, Calif., September 18, 1974.

SUBJECT: STATEMENT MADE BY SEASHORE ENVIRONMENTAL ALLIANCE, AND COMMENTS MADE BY WESTERN OIL AND GAS ASSOCIATION

Statement: The area (Southern California offshore) is noted for its seismic instability. The USC Graduate School of Seismology reported that in one day, recently, over 60 earthquakes occurred in this area, registering from 2.0 to 4.5 on the Richter scale.

Comment: In the 39-year period of recording in the 26,622 kilometer square Los Angeles area (which includes the USC Campus), the average level of seismic activity is only 10 earthquakes per year for those greater than 2.0 on the Richter scale. The offshore area west of Los Angeles is relatively more quiet seismically. It may be true that USC has recorded as many as 60 earthquakes in one day, approximately 2.0 on the Richter scale, but such shocks are not strong enough even to be perceptible except on sensitive measuring instruments. For further details, reference is suggested to "Seismicity of the Southern California Region, 1 January, 1932, to 31 December, 1972. J. Hileman, C. Allen, and J. Nordquist, Seismological Laboratory, California Institute of Technology, 1973."

As a matter of interest, the July 5, 1968 earthquake in the Santa Barbara channel of magnitude 5.2, occurred in an area where 7 platforms were in operation in the eastern channel and no problems resulted.

Statement: Drilling operations induce seismic activity, even where it does not normally exist. This has been documented by studies in Denver.

Comment: The earthquakes in the Denver area were not caused by drilling operations and the withdrawal of subsurface fluids. Studies have indicated that the small magnitude earthquakes were caused by high volume and high pressure injection of waste material from the Rocky Mountain Arsenal into deep disposal wells drilled into existing fracture system in basement rocks.

Statement: Subsidence of an area around or near oil drilling operations has occurred on a number of occasions. The 28-foot drop in Long Beach was attributed to oil drilling? And subsidence, associated with oil drilling was instrumental in the break of the Baldwin Hills Dam.

Comment: Subsidence of an area around or near oil drilling operations has occurred only in *rare* instances. The 28-foot drop in Long Beach has been attributed by most investigators to withdrawal of subsurface fluids and the consequent reduction of subsurface pressure. Technology is now available to prevent subsidence and to predict the potential for its occurrence at a particular site. For example, in the City of Los Angeles, precise ground surface leveling surveys are required and are being conducted routinely as a means of detecting subsidence at an early date in the producing life of an oil field and to determine the necessity of repressuring operations.

In connection with the rupture of the Baldwin Hills Dam, earth movements had been in progress for many years prior to the construction of the dam, geologists predicted the dam would fail before it was built, and it was regarded by some geologists as inevitable that the dam should fail.

Statement: A blowout from an oil platform would further pollute the ocean, damage marine life essential to man, and ruin our beaches.

Comment: A blowout at an oil platform during which oil was introduced into the ocean would cause further pollution, and, if the oil reached the beaches, would undoubtedly cause some harm and would possibly damage marine life in the ocean and in the intertidal zone. Only a few polluting blowouts, however, have occurred during the drilling of over 18,000 offshore wells in the last 26 years. And production of over 6 billion barrels of oil and over 23 trillion cubic feet of natural gas has been accomplished.

Scientific studies have shown that there has been no permanent damage to either marine life or to the beaches, and only in one instance did massive pollution of the beaches and shore occur. Studies have shown that six times as much oil is introduced into the ocean each year from naturally occurring oil seeps as is introduced by offshore operations.

Crude oils from seeps have been contributed to the marine environment at least through recent geological time, and analysis of the ocean for hydrocarbons reveals their presence in extremely low concentrations. Destructive mechanisms exist, e.g., biodegradation, photo-oxidation, which have prevented the buildup of petroleum hydrocarbons in the ocean. Studies indicate that increased additions of hydrocarbons through man's activities to the ocean are destroyed by these mechanisms.

Statement: An oil spill from a tanker would create the same bad effects as a platform blowout, and a ruptured pipeline, moving the oil underwater to the shore, would also have the same severe effects.

Comment: Tanker spills are potentially more dangerous to the environment than spills from blowouts. A tanker spill has the potential of instantaneous release of large quantities of oil, whereas a blowout would provide a lower volume continuous release over a longer period of time. Because an oil spill tends to spread out with time, a continuous release is more susceptible to effective action by oil spill cleanup equipment. Also, the type of oil involved in a tanker spill would be important, in that a spill of refined products would be potentially more dangerous than a spill from a blowout. Refined products are more toxic to marine organisms than crude oil.

A spill resulting from a ruptured pipeline would be insignificant in comparison to either a tanker spill or a blowout because of the shut-in devices employed in offshore pipelines. The volume of oil spilled from a pipeline rupture would be very small in comparison with other types of accidents. It is much safer, furthermore to transport oil by pipelines than by small tankers. Regardless of the means of transport, it must be remembered that the same volume of oil will have to be provided to meet consumer demand in southern California.

Statement: Dredging for pipeline construction to the shore could play havoc with the water quality.

Comment: Dredging for pipeline construction would produce local sediment in the water column, but this is very small compared to the amount of sedimentation produced by wave action in near shore areas and by the discharge of sediment from streams and rivers. There is no evidence that water quality is significantly changed. Any effect of dredging operations on water quality would be very localized and of limited duration.

Statement: Construction of pipeline terminals, storage tanks and refineries will require extensive amounts of coastline land, threatening the intent of the California Coastal Zone Conservation Act.

Comment: Construction of onshore facilities will require commitment of some land, estimated to be one acre per 125,000 barrels storage capacity. Only a small amount would necessarily be in the sensitive nearshore areas. Most of the facilities would be located in areas zoned for industrial activity. In any event, a proposal to construct onshore facilities within the Coastal Zone of California must, perforce, comply with the requirements of the Coastal Zone Conservation Act.

The fact that oil can be and is transferred by use of pipelines, allows maximum flexibility when locating terminals and storage facilities. Terminals can be built offshore with storage inland. Simple observation of the present harbor facilities should reveal that oil handling and bulk storage require a minimum amount of space as compared to the most modern methods of handling other type cargo, e.g., containers and barges.

With respect to pipelines for natural gas transmission, lines will be buried and will be routed through city streets or rights of way to tie into existing gas transmission lines. If compressor stations are required, they will be built inland from the coast and will be designed to have minimum impact on the environment. Liquified natural gas will be brought into terminals already planned by the local gas distribution company.

Statement: Oil leaks or spills from these onshore facilities would be a danger to the health, welfare and safety of the people.

Comment: Existing records of the operations of these facilities reveal an excellent safety performance. Emergency plans, equipment and trained personnel are available in the event of any unforeseen catastrophe. It is fair to state that the oil industry is unsurpassed by any industry in regard to the ability and performance when necessary to act in emergencies of any nature.

To illustrate that record and performance, the City of Los Angeles and its urban drilling operations serve as a pertinent example. Within the city, oil and gas are produced in a multiplicity of urban environments at no sacrifice and jeopardy to health, welfare and safety of the citizens of Los Angeles.

Statement: These facilities on shore, where planned, would create potential fire hazards in our highly populated coastal area.

Comment: Facilities that may be planned for onshore locations will generally not be in highly populated areas but rather in areas zoned for industry. Present fire codes have been sufficient in the prevention of loss of other properties and lives. Again, the City of Los Angeles and its urban oil operations furnish the best example.

Statement: If State oil pools, inside the three-mile limit, are tapped by drilling in federal waters, which is highly probable, the State will be obliged to open competitive bidding for drilling on the State tidelands—even in present sanctuaries.

Comment: At the present time, a buffer zone three-quarters of a mile wide is proposed between state lands and those where federal leases would be offered. Only under unusual circumstances of geologic continuity within the buffer zone would oil fields within state lands be subject to drainage as a result of the development of federal leases. In general, the geology of southern California oil producing areas is characterized by both structural and stratagraphic discontinuities, with the result that drainage of oil producing reservoirs over long distances is unusual. A buffer zone like that proposed should be sufficient to protect state lands from drainage.

By statute, the State of California is prohibited from granting leases covering any portions of the sanctuaries established along the southern California coastline unless it determines . . . first, that oil or gas deposits are believed to be contained in such lands . . . second, that the same are being drained by means of wells upon adjacent lands, and third, that leasing of the same for the production of oil and gas will be in the state's best interests. Even where drainage is occurring, the State Lands Commission has some discretion as to allowing drilling on drainage portions of the State sanctuaries. If the state elects to allow such

drilling, it is generally required to keep to a minimum the area in which such drilling is allowed.

Statement: The federal government neither has the authority, nor is it seeking the authority, to inspect oil company training programs or to conduct and validate training exercises on drilling platforms to (a) protect against the possibility of an oil spill, or (b) provide for immediate action required to initiate cleanup procedures.

Comment: It is not true that the federal government neither has the authority nor is seeking the authority to inspect oil company training programs, or to conduct or evaluate training exercises on drilling platforms to protect against the possibility of an oil spill. The authority of the federal government and its intent are demonstrated by numerous regulations governing the conduct of operations with reference to the training of company employees or operating personnel. Proposed OCS, Order No. 2, Pacific Area, of the United States Geological Survey, having to do with supervision and training is as follows:

> The company and contractor drilling supervisor shall have completed a well-control school or seminar within the previous year and shall have passed a proficiency test. The operator shall require well-control training for drilling other than the required weekly blowout prevention drills. Written certification shall be filed immediately with the (Federal) supervisor on compliance. . . .

Statement: Under present federal plans, financial liability of the oil companies will be restricted specifically to only cleaning up any oil spill—and does not include payment for damages to the environment.

Comment: It is not true that under present federal law (federal plans are irrelevant), that financial liability of the oil companies is restricted to only cleaning up any oil spills. The Outer Continental Shelf Lands adopts by reference the laws of California in determining liability for conduct on the OCS. Under the laws of California, the person responsible for damage done by a tort is responsible not only for clean-up of the debris, but for injuries done to third parties as a result. Thus, in the cases arising out of the Platform A Santa Barbara Channel spill, the oil companies cleaned up the beach, and have also paid upwards of $10 million in settlements for various sorts of damage.

As respects damages "to the environment", the same rules apply: that is, that the oil companies are liable when other people would be. For instance, air pollution injures the "environment". Where a particular person creating air pollution creates what is known as a "nuisance", he is liable for damages caused by it. But the ordinary person who, by driving a car, adds something to air pollution, is not generally liable for that injury to the "environment". The oil companies, operating in the Outer Continental Shelf, would be liable to the same extent as anybody else.

Statement: Oil production will cause deterioration of residual communities, tourist meccas and general downgrading of property values as happened at Venice.

Comment: There are some instances where communities situated in or about oil production have deteriorated. Examples include Wilmington, Huntington Beach and Venice. Although oil production may be one contributing factor to this decay, it is not necessarily the only one in that many of these localities are afflicted by other types of heavy industries. Wilmington is a case in point.

Modern oil well drilling and production carried on in an urban environment do not affect the surrounding community in an adverse way. The City of Los Angeles contains 17 urban drill sites enclosing a total of more than 350 wells and surface property values adjacent to these drill sites remained unchanged. With proper protective measures oil operations can be made compatible with virtually any onshore environment.

It is true that oil production in the community of Venice caused serious problems and is probably responsible for the decline that swept through the Venice Peninsula commencing in 1930. At the same time it must be recognized that operations such as those at Venice are no longer permitted in the City of Los Angeles and are not representative of modern development drilling as conducted by the oil industry.

Statement: What may be gained in federal revenues will be small in comparison to possible property damages.

Comment: The reverse is true. Federal revenues will be many times the values associated with any possible property damage. These revenues will consist primarily of lease payments, royalties, federal income taxes and other taxes.

It is estimated that lease payments plus royalties derived from leasing to

relatively shallow-water portions of offshore southern California, will be on the order of $11 billion. When deeper waters are developed, the resources received from such operations may be several times greater.

Federal income taxes paid by the oil industry may amount to $5 billion.

One estimate of the costs associated with the offshore sale is from 0.1 to 0.2 billion dollars in possible property damage as a consequence of unattractive aesthetics.

Other gains accruing from the sale of offshore leases are a secure source of crude supply, improvement in our balance of payments, greater employment and an increase in state and local revenues.

Statement: The recent energy crisis turned out to be a benefit to major oil producers in the following ways:

(a) The Alaskan pipeline;

(b) Independent service stations failing;

(c) Profits up to 400 percent over prior years;

(d) OCS accelerated development; and

(e) Drilling should be approved anywhere regardless of environmental impact.

Comment: (a) Major oil producers as a group could not be said to benefit from the recent energy crisis in the form of approval of the Trans Alaskan Pipeline.

In the first place, only a very few of the major integrated oil companies have a significant position on the North Slope of Alaska The bulk of the major oil companies might be placed at a competitive disadvantage relative to those few firms which have substantial North Alaskan holdings at the time that oil reaches the market place. The fact that most oil spokesmen representing both large and small oil interests advocated the pipeline was a manifestation of what they perceived as petroleum experts to be in the nation's interest.

Secondly, although final House and Senate action was probably hastened by the embargo, it was clear prior to the recent Arab-Israeli war that the intention of both houses was to enact the necessary legislation for the pipeline. In July the Senate passed a bill paving the way for the pipeline by a margin of 77–20. A similar bill was passed by the House in early August by a margin of 356–60. (Passage of the final bill by margins of 80–5 in the Senate and 361–14 in the House again indicated the overwhelming belief of Congress that the pipeline is in the public interest.)

(b) Major oil producers have not benefitted from the recent energy crisis in the form of independent service station failures.

By means of both the mandatory gasoline allocation system and through the implementation of the price control program Federal authorities have protected independent marketers. Data which have recently become available suggest that independent gasoline marketers have actually improved their position vis-a-vis the majors. The Lundberg survey, the authoritative source of gasoline market share information, shows that nonbranded marketers increased their market share 21 percent between February 1972 and February 1974. During that same period, according to Lundberg, total industry gallonage decreased approximately one and a half percent.

(c) Recent events in the energy markets have substantially raised oil industry profits; however, through the first half of 1974 no company that can reasonably be classified as a major oil producer received anything like a 400 percent increase.

There are two significant points to be made about the profit improvements which did occur. The first is that the large increases are unrepresentative in the sense that they reflect "unique" circumstances such as profits on reevaluation of inventory and gains on foreign currency fluctuations. Treasury Secretary William Simon recently testified to a Senate Committee with regard to first quarter 1974 profits that "After these special areas are separated out, the mainstream of business, the ongoing petroleum operations, is seen to have recorded an increase in profits of 21 percent." A figure such as the one yielded by Secretary Simon's analysis is a more realistic appraisal of the state of petroleum industry earnings.

The second point is that an earnings increase or decrease of any percentage is meaningless out of context. For instance, a 400 percent increase might mean that a company's earnings went from only one dollar to four dollars. The important consideration is whether or not the domestic petroleum companies are achieving sufficient earnings to support a healthy industry. In past years the domestic industry has been earning a lower rate of return on capital employed

than those typical of U.S. manufacturing. This rate of return was too low for a healthy industry and far too low to attract the massive capital needed for Project Independence.

(d) The oil industry will in the future as it has in the past strive to satisfy consumer demands for petroleum. If the supply necessary to meet future demands is not available from domestic sources, such as the Outer Continental Shelf, then it will come from abroad and be subject to the same risk of interrupted supply that currently imported oil is. The primary benefit to the oil industry of accelerated Outer Continental Shelf development is the same benefit the consumer receives, security of supply. Other than security considerations there are no particular advantages to accelerated OCS development for major producers.

Statement: The world has a surplus of oil and no place to store it.

Comment: Ever since the Middle East oil fields were developed, there has been a large reserve to production ratio there. World oil reserves similar to most natural resources, are basically stored in the ground until needed. Today the Middle East countries are restricting production since demand at today's prices, is less than the recent production rate there. Kuwait's minister of oil, Abdel Atiqi has stated, "If prices are determined by supply and demand, then we shall reduce the supply of our crude oil to increase the demand on it." The Middle East countries currently prefer to keep the oil in the ground for possible future benefits, rather than to produce more now at a lower price.

Although the Middle East has a large reserve to production ratio, the United States does not. We have been and will continue to be a large net importer of oil and now import 35 percent of our oil needs. This is despite our large reserves of other energy such as coal and shale oil.

U.S. production of oil peaked in 1970, and hence it will not be easy to decrease our imports to an acceptable level. OCS drilling is a necessary step towards being able to decrease our level of imports. Conservation and production of our other energy reserves represent other necessary steps.

Statement: Elk Hills could be used in the interim while researching alternative energy supplies and other oil and gas sources.

Comment: The Elk Hills Naval Petroleum Reserve could contribute to the West Coast domestic oil supply materially, if it were opened up for full production. However, in no sense could it be regarded as a large enough source to bridge the gap between the present and some future time when "alternative energy supplies and other oil and gas sources" are available in sufficient volume to fill West Coast energy requirements.

According to information provided to the Congress by the Comptroller General of the United States, Elk Hills has a present production capability of 100,000 barrels per day which could be built up with substantial additional effort to a maximum daily deliverable rate of 267,000 barrels per day. In either case, additional transportation facilities would also be required. Contrast this volume with present imports into District 5 in excess of 1.1 million barrels per day and a total District 5 demand of about 2.2 million barrels per day. Furthermore, even with substantial development of new production in the Southern California Outer Continental Shelf and in Alaska, District 5 will still require significant volumes of foreign imports in 1985.

Elk Hills production should not be regarded as a substitute for other new domestic production but rather should be regarded as a desirable supplement to other new developments such as the Southern California Outer Continental Shelf.

Elk Hills Naval Petroleum Reserve should be considered not only for its oil but its natural gas as a means of meeting future energy requirements, if it should be decided by Congress that depletion of Elk Hills for non-military purposes would be a good policy. Natural gas production from Elk Hills would not provide interim assistance for the natural gas shortage now being experienced, and which should become acute in the next six years. The reason is that all gas reserves at Elk Hills will ultimately be cycled to maintain reservoir pressures and maximize Stevens Zone oil production. And even if it were possible to divert all gas to sales, it would compose only 5 percent of Southern California gas requirements for the rest of this decade.

Statement: A lawsuit is still pending by the State of California against Union Oil Company regarding the Santa Barbara spill.

Comment: The State of California's lawsuit against Union Oil Company has been settled.

Statement: In 1968 Congress passed the Public Information Act designed to make records and data available to the public and from which oil companies were exempted.

Comment: "Public Information Act" probably means the "Freedom of Information Act" (5 U.S. Code § 552). It is not true that "oil companies are exempted". The Freedom of Information Act requires, in general, that a great deal of information in United States Government files be available to the public. One general exception is trade secrets and commercial or financial information which is privileged or confidential. Another is geological and geophysical information and data. Thus, anyone's "trade secrets" are protected. And anyone's geological and geophysical information is protected because it is normally privately obtained, and obtained at very great expense. If it were available to the world at large, there would be little motive to pay for doing the work in the first place. The idea that a person who has, at his own expense, done valuable research should get the fruits of that research, is not particularly unAmerican.

Statement: The Administration wants to speed the sale to obtain funds to offset 1974–75 budget deficits and to fight inflation.

Comment: The objective of both the Federal Administation and the oil industry in opening up the Southern California Outer Continental Shelf for production is to help decrease the continuing dependence of both the nation and the West Coast on imported oil. President Ford, in his press conference on August 28, again stressed the importance to the country of "Project Independence." The development of production from the OCS will be a significant contributor to the success of that Project.

Certainly the revenue to the Federal Government from the OCS lease sale will help offset projected budget deficits and fight inflation. The development of production in this area will also help to fight inflation by providing a domestic source of crude oil to replace a part of the required foreign oil imports, over whose price the United States has little or no control. These are not primary objectives, but they are collateral benefits which we believe the Administration and all citizens support.

Statement: Isn't it true that the need for offshore drilling is not established because:

(a) there is no national energy policy;

(b) oil resource information upon which governmental decisions are based, is furnished primarily by oil companies;

(c) studies evaluating the effect of conservation techniques (planning, building codes, transportation methods and patterns, production of long-lasting materials, etc.) are inadequate;

(d) adequate attention is not being given to the funding and development of alternative energy resources to decrease our dependency on oil;

(e) according to Interior Secretary Rogers C. B. Morton, some of the forthcoming Alaskan oil may be exported to Japan because of insufficient demand for it in the Western States.

Comment: The free enterprise system works because businessmen see a need and try to fill that need in a way that uses the least economic resources. If business is successful, the country obtains the maximum national output from given resources. Coincidentally, business makes a profit. Thus profits are the driving force in our economic system, sending out signals—potential profit—which tells us what products consumers want produced and where to invest.

Is there a need for offshore drilling? Regardless of whether politicians have decided upon an energy policy, the American consumers says yes and our economic analysis says yes.

Given the economic environment we live in, there are only two reasons why the oil industry should not be allowed to drill offshore. First, the oil industry and everyone else could have misjudged demand, making it unnecessary to find oil offshore. Second, potential danger to our environment may be so great that no one should be allowed to drill offshore.

Has the oil industry misjudged demand? Do we really need to drill offshore? No one can know the future, but surely it is reasonable to think oil companies made the most careful, complete forecast we could—otherwise, oil firms would not risk paying the government billions of dollars in lease bonuses. What happens if industry is wrong? If we've underestimated future demand, price will be higher than otherwise, so there's even more reason to allow drilling. If we've overestimated demand and end up with an oil surplus, the public will benefit at the expense of oil companies. Either way, the public benefits.

Many opponents of OCS drilling are really opposed to pollution. The oil industry dislikes pollution, and we've usually cleaned up oil spills because we've felt a moral responsibility. Currenty, there are other reasons why oil drillers will be very careful to avoid spilling oil. Federal law makes it illegal to spill oil or

fail to report oil spills. If an oil spill does occur, the spill must be cleaned up at the expense of the company that spilled the oil. In short, if an oil company spills oil, it costs the company money—lots of it. The industry has incentive to avoid pollution, but if some does occur, we'll see it's cleaned up. What more could you ask?

Well, opponents might ask that we not export oil found offshore. Indeed, most companies have agreed not to export this oil (or oil from the Alaskan pipeline). And before we could export oil discovered offshore or, for that matter, any oil transported across federal rights-of-way, the President would have to order a study of the impact, approve the study, and have Congress approve the action. Thus, the federal government and the oil industry offer the public substantial guarantees that oil will be produced cleanly, safely, and for the benefit of the American consumer.

Mr. MANNING. And now I would like to introduce Mr. Sherman Clarke who will discuss petroleum supply and demand. Thank you.

Mr. CLARKE. On behalf of the Western Oil and Gas Association, we prepared a report relating to the potential petroleum supplies from Federal offshore California lands. This report dealt with costs and benefits, as well as the pertinent energy framework involving supply-and-demand projections by form of energy.

There is always a question as to the regional limits to place upon such an analysis, and while we believe the pros and cons of developing any indigenous energy supply should most properly be viewed within the context of the total national situation, we have also prepared an energy balance for the localized area of southern California as well as for the essentially discrete oil marketing area of district V, the five far Western States plus Alaska and Hawaii.

Let me begin with the situation in southern California. Both oil and gas have been produced in the region throughout this century, but the annual rates of production for both have been declining since the late sixties. Excluding the Federal offshore lands we forecast a continuing decline even at higher producer prices, although the rate of decline will be slowed.

In 1973, the total input to petroleum refineries in southern California was a little over 1 million barrels per day, of which crude oil produced in California accounted for about 60 percent. By 1985, we expect the output from present fields to have declined by 200,000 barrels per day or one-third.

Federal offshore production in relatively shallow waters could reach 600,000 barrels per day in the same year, so that total indigenous production could approximate the refinery requirement if there were no expansion in refining capacity. On the same basis, the total State would need several hundred barrels per day of crude oil supply from outside the State.

The first conclusion, therefore, is that Federal offshore oil production would only help to meet local requirements, and that there would be no excess of local production even if there were absolutely no growth in demand. But we do anticipate a modest growth in oil demand and in refinery capacity related to that demand, rather than to the magnitude of local production.

Thus, for both southern California and the total State, substantial movements of crude oil into the State will continue to be required in all future years even with Federal offshore production.

The natural gas outlook is quite different because no growth in total supply—and therefore consumption—is achievable for many

years and in fact, the supply has been declining and almost certainly will continue to decline for several more years at least. The indigenous supply in southern California represents a small fraction of the total supply, less than 10 percent, and is declining along with all other sources. Federal offshore gas production alone could not offset the anticipated decline from all present sources; out-of-State supplies of gas from coal and liquified natural gas from Alaska and abroad will also be needed.

This leads to a second conclusion, that the natural gas potentially available from the Federal offshore lands will help, as will any new source of gas, but even with no growth in local use of gas, indigenous supply will account for only a small fraction of the total.

Let me emphasize that these conclusions with respect to the southern California gas-and-oil balances are not predicated on a huge growth in demand, or even on any growth. But we do foresee growth albeit at a quite low rate of only 2.5 percent per year between 1973 and 1990.

The outlook in district V is somewhat different because of Alaskan oil, and ultimately gas. Counting on both Alaska oil and Federal offshore California oil, we believe that district V will in effect be just about in balance; that is, for 1980 and thereafter, district V production will be essentially equal to district V requirements.

Whether all North Slope and other Alaskan oil will be used within district V is another matter. There are no laws, rules, or regulations which require that oil produced within district V be used within district V. Therefore, it is entirely possible that a portion of the new Alaskan production will be shipped to other districts, with a counterbalancing import of crude oil and petroleum products, principally low-sulfur fuel oil, from abroad.

The natural gas balance in district V, once North Slope gas becomes available, is still highly speculative because we do not know when that gas will become available to consumers and we do not know the direction of flow or regional disposition.

However, the North Slope gas will be under the jurisdiction of the Federal Power Commission, and with gas supply expected to continue to be extremely tight through the country, I believe it is safe to assume that no one region will receive the entire supply or be able to satisfy all of its gas markets.

Therefore, it is anticipated that even with Federal offshore California gas production plus Alaskan gas and all other sources, the total gas supply and use within district V through 1990 will not be significantly higher than it is today, and may well be lower. This leads to our third conclusion, that on the broader regional basis of district V, indigenous oil and gas supplies from all potential sources will not be surplus to the district's requirements.

The development of any localized supply of energy today is actually far more of a national issue than it is a local one. While our conclusions from the regional analysis support the need for increased local production, the national analysis provides the basis for demonstrating the absolutely critical need for increased domestic supplies of all forms of energy.

The tables at the end of my submission provide our projections, but on the basis of any supply and demand projections we have seen,

there appears to be no way that the Nation can be fully self-supporting in energy through 1990.

In fact, we believe that oil and gas imports will increase further before a peak is reached, and it will be difficult to reduce the ultimate level of imports, which could be about 9 million barrels of oil per day and several trillion cubic feet of gas—if we can obtain such supplies—versus our current imports of 6 million barrels of oil per day and one Tcf of gas.

So far, all I have discussed is the volumetric need for the Federal offshore California oil and gas supply. But the volumetric characteristics only become meaningful when translated into their broader economic significance:

1. We cannot be sure of the adequacy of energy supplies from foreign sources. Therefore, this domestic supply will help to support the basic economic activity of the country.

2. The average prices of domestic oil and gas are below the prices of foreign sources. Energy users in southern California will save a significant amount of money by having access to this offshore supply; we estimate the savings at $10 to $20 billion over the life of the field.

3. The offshore production will yield lease payments, royalties and taxes to governments that will amount to almost $20 billion.

4. The less we rely on our own resources, the greater will be our reliance on oil and gas from OPEC. This could force even higher prices for supplies from them; in any event, the Nation's balance of payments will be that much more difficult to maintain on a reasonable basis.

The need for the petroleum supply from Federal offshore California lands is based on the many different considerations described above, which in my judgment combine to create a most imperative and urgent need.

Senator TUNNEY. Thank you, Mr. Clarke, Mr. Anderson?

[The attachments follow:]

CONSUMPTION OF PRIMARY ENERGY IN SOUTHERN CALIFORNIA, 1960–90

[Trillions of Btu]

	Oil	Gas	Coal [1]	Hydro-electric	Geo-thermal	Nuclear power	Total
1960	1,216	767	34	51	----	----	2,068
1961	1,274	819	55	39	----	----	2,187
1962	1,284	871	37	65	----	----	2,257
1963	1,337	891	43	77	----	----	2,348
1964	1,419	1,010	52	58	----	----	2,539
1965	1,451	1,051	61	81	----	----	2,644
1966	1,534	1,105	48	63	----	----	2,750
1967	1,576	1,198	52	88	----	2	2,916
1968	1,666	1,251	54	58	----	11	3,040
1969	1,761	1,244	56	90	----	22	3,173
1970	1,747	1,269	57	73	----	27	3,173
1971	1,895	1,228	48	77	----	33	3,281
1972	1,974	1,180	47	66	----	28	3,295
1973 preliminary and estimated	2,167	1,180	63	96	----	23	3,529
1980	3,110	1,030	55	95	----	85	4,375
1985	3,422	1,135	150	100	13	230	5,050
1990	3,865	1,250	210	100	20	360	5,805

[1] As such.

Note: Shipments of oil products to areas outside of southern California are not included in this table.

Source: S. H. Clark Associates.

CONSUMPTION OF PRIMARY ENERGY IN DISTRICT V, 1960-90

[Trillions of Btu]

	Oil	Gas	Coal [1]	Wood	Hydro-electric	Geo-thermal	Nuclear power	Total
1960	2,790	1,726	64	135	739	----	----	5,454
1961	2,907	1,854	86	133	733	1	----	5,714
1962	2,935	1,934	73	132	854	1	----	5,928
1963	3,028	2,017	78	130	905	2	2	6,161
1964	3,233	2,239	88	128	893	2	4	6,586
1965	3,279	2,268	99	126	1,044	3	3	6,812
1966	3,472	2,389	88	124	1,037	3	12	7,125
1967	3,615	2,478	86	122	1,211	4	26	7,542
1968	3,877	2,663	90	120	1,192	5	54	8,001
1969	4,053	2,728	96	118	1,489	7	64	8,554
1970	4,074	2,874	98	116	1,424	6	56	8,648
1971	4,307	2,939	104	114	1,578	6	63	9,110
1972	4,510	2,975	166	112	1,570	15	62	9,410
1973 estimated	4,828	2,884	228	110	1,670	20	57	9,797
1980	7,026	2,697	814	100	1,735	60	375	12,807
1985	8,019	2,963	1,280	100	1,755	98	975	15,190
1990	9,210	3,250	2,060	100	1,775	135	1,460	17,990

[1] As such.

Note: Details may not add to totals due to rounding.

Source: Historical—Developed by S. H. Clark Associates from various basic sources. Projected—S. H. Clark Associates.

ALTERNATIVE 1[1] OIL SUPPLY AND CONSUMPTION IN REGIONS OF DISTRICT V, 1972–1990

[Thousands of barrels per day]

	District V					Total California[2]					Southern California					Rest of district V[2]				
	1972	1973	1980	1985	1990	1972	1973	1980	1985	1990	1972	1973	1980	1985	1990	1972	1973	1980	1985	1990
Refinery input:																				
Crude oil:																				
Domestic:																				
Alaska	191	201	1,600	2,211	2,858	132	127	1,121	1,556	2,062	87	83	740	854	1,215	59	74	479	655	796
California	968	933	800	650	550	968	933	800	650	550	639	616	528	429	363	0	0	0	0	0
California federal offshore[4]	0	0	67	600	600	0	0	67	600	600	0	0	67	600	600	0	0	0	0	0
District IV	31	28	25	25	25	31	28	25	25	25	31	28	25	25	25	0	0	0	0	0
District III	2	5	0	0	0	2	5	0	0	0	2	5	0	0	0	0	0	0	0	0
Subtotal	1,192	1,167	2,492	3,486	4,033	1,133	1,093	2,013	2,831	3,237	759	732	1,360	1,908	2,203	59	74	479	655	796
Foreign:																				
Canada	258	242	50	0	0	0	0	0	0	0	0	0	0	0	0	258	242	50	0	0
Other	403	566	637	170	206	284	420	499	0	0	165	257	322	0	0	119	146	138	170	206
Subtotal	661	808	687	170	206	284	420	499	0	0	165	257	322	0	0	377	388	188	170	206
Total crude	1,853	1,975	3,179	3,656	4,239	1,417	1,513	2,512	2,831	3,237	924	989	1,682	1,908	2,203	436	462	667	825	1,002
Stock change	+4	−1	0	0	0	+4	−1	0	0	0	+2	−1	0	0	0	0	0	0	0	0
Total crude runs	1,849	1,976	3,179	3,656	4,239	1,413	1,514	2,512	2,831	3,237	922	990	1,682	1,908	2,203	436	462	667	825	1,002
Unfinished oils	38	37	35	35	35	38	37	35	35	35	25	24	23	23	23	0	0	0	0	0
Other hydrocarbons	74	66	70	70	70	64	56	60	60	60	42	37	39	39	39	10	10	10	10	10
Total input	1,961	2,079	3,284	3,761	4,344	1,515	1,607	2,607	2,926	3,322	989	1,051	1,744	1,970	2,265	446	472	677	835	1,012
Processing gain	61	81	102	116	134	47	50	81	91	103	31	32	54	61	70	14	31	21	25	31
Total refinery supply	2,022	2,160	3,386	3,877	4,478	1,562	1,657	2,688	3,017	3,435	1,020	1,083	1,798	2,031	2,335	460	503	698	860	1,043

Other receipts:																				
Net product receipts from districts I–IV	115	99	100	100	100	0	0	0	0	0	0	0	0	0	0	115	99	100	100	100
Net product imports	26	41	0	0	0	26	41	0	0	0	40	57	0	0	0	0	0	0	0	0
Transfers from crude oil	3	10	10	10	10	3	10	10	10	10	2	7	7	7	7	0	0	0	0	0
Stock changes	+7	−14	0	0	0	+6	−7	0	0	0	+4	−5	0	0	0	+1	−7	0	0	0
Total oil supply	2,159	2,324	3,496	3,987	4,588	1,585	1,715	2,698	3,027	3,445	1,058	1,152	1,805	2,038	2,342	574	609	798	960	1,143
Consumption, of which:																				
Gasoline [5]	966	1,006	1,380	1,658	1,966	724	751	1,055	1,261	1,489	466	484	692	827	990	242	255	325	397	477
Jet fuel	319	304	394	469	554	230	220	285	343	408	144	137	171	203	242	89	84	109	126	146
Distillate	277	314	534	621	733	160	182	354	401	468	104	120	275	307	348	117	132	180	220	265
Residual	321	421	732	755	824	242	331	603	598	633	180	246	368	389	437	79	90	129	157	191
All other	276	279	356	384	411	229	231	301	324	347	164	165	219	232	245	47	48	55	60	64
Total domestic consumption	2,159	2,324	3,396	3,887	4,488	1,585	1,715	2,598	2,927	3,345	1,058	1,152	1,725	1,958	2,262	574	609	798	960	1,143
Net product exports [6]	0	0	100	100	100	0	0	100	100	100	0	0	80	80	80	0	0	0	0	0
Total consumption	2,159	2,324	3,496	3,987	4,588	1,585	1,715	2,698	3,027	3,445	1,058	1,152	1,805	2,038	2,342	574	609	798	960	1,143

[1] Alternative 1 oil supply assumes a high level of oil availability from Alaska and from California federal offshore.
[2] Includes markets served in Nevada and in Arizona.
[3] Alaska, Hawaii, Pacific Northwest and a portion of Arizona.
[4] Assumed to all go to Southern California refineries; some may in fact go to Northern California refineries.
[5] Includes ethane and special naphthas.
[6] Consists of high sulfur coke and fuel oil and various speciality products.

Source: Developed by S. H. Clark Associates.

ALTERNATIVE 2 [1] OIL SUPPLY AND CONSUMPTION IN REGIONS OF DISTRICT V, 1973-90

[Thousands of barrels per day]

	District V				Total California [2]				Southern California [2]				Rest of District [3]			
	1973	1980	1985	1990	1973	1980	1985	1990	1973	1980	1985	1990	1973	1980	1985	1990
Refinery input:																
Crude oil:																
Domestic:																
Alaska	201	1,000	1,600	2,000	127	671	1,122	1,356	83	443	741	895	74	329	478	644
California	933	800	650	550	933	800	650	550	616	528	429	363	0	0	0	0
California federal offshore [4]	0	25	250	500	0	25	250	500	0	25	250	500	0	0	0	0
Districts III and IV	33	25	25	25	33	25	25	25	33	25	25	25	0	0	0	0
Subtotal	1,167	1,850	2,525	3,075	1,093	1,521	2,047	2,431	732	1,021	1,445	1,783	74	329	478	644
Foreign:																
Canada	242	200	200	200	0	0	0	0	0	0	0	0	242	200	200	200
Other	566	887	712	770	420	749	512	563	257	462	264	221	162	138	170	206
Subtotal	808	1,087	912	970	420	749	512	563	257	462	264	221	401	338	370	406
Total crude runs	1,976	2,937	3,437	4,045	[5] 1,514	2,270	6,593	2,994	[6] 990	1,483	1,709	2,001	478	667	848	1,050
Unfinished oils	37	35	35	35	37	35	35	35	24	23	23	23	0	0	0	0
Other hydrocarbons	66	70	70	70	56	60	60	60	37	39	39	39	10	10	10	10
Total input	2,079	3,012	3,512	4,150	1,607	2,335	2,681	3,089	1,051	1,515	1,771	2,056	488	677	858	1,060
Processing gain	81	94	110	128	50	73	83	96	32	48	55	64	15	21	27	33
Total refinery supply	2,160	3,136	3,652	4,278	1,657	2,438	2,767	3,285	1,033	1,593	1,826	2,130	503	698	885	1,093

[1] Alternative 1 oil supply assumes a high level of oil availability from Alaska and from California federal offshore.

[2] Includes markets served in Nevada and in Arizona.

[3] Alaska, Hawaii, Pacific Northwest and a portion of Arizona.

[4] Assumed to all go to Southern California refineries; some may in fact also go to Northern California refineries.

[5] Includes ethane and special naphthas.

Source: Developed by S. H. Clark Associates.

CONSUMPTION OF PRIMARY ENERGY IN THE UNITED STATES, 1960-85

[Quadrillions of Btu]

	Oil	Gas	Coal [1]	Hydro-electric	Geothermal	Nuclear power	Total
1960	20.1	12.7	10.4	1.8			45.0
1961	20.5	13.2	10.2	1.6			45.6
1962	21.3	14.1	10.5	1.8			47.7
1963	22.0	14.8	11.1	1.7			49.6
1964	22.4	15.7	11.7	1.9			51.6
1965	23.2	16.1	12.4	2.1			53.8
1966	24.4	17.3	13.0	2.1		0.1	56.8
1967	25.3	18.3	13.0	2.3		.1	59.2
1968	27.1	19.6	13.3	2.3		.1	62.4
1969	28.4	21.0	13.5	2.7		.2	65.8
1970	29.6	22.0	12.9	2.7		.2	67.4
1971	30.6	22.8	12.1	2.9		.4	68.7
1972	33.0	23.1	12.5	2.9		.6	72.1
1973 [2]	34.7	23.6	13.5	2.9		.9	75.6
1980	42.3	[3] 24.4	18.1	3.1	0.1	6.0	94.0
1985	45.8	[4] 25.5	22.3	3.2	.2	13.0	110.0
1990	50.0	[5] 26.5	25.4	3.3	.3	22.5	128.0

[1] As such.
[2] Preliminary.
[3] Includes 0.3 quadrillion Btu for coal gasification projects, equivalent to about 25,000,000 tons of coal input.
[4] Includes 2.0 quadrillion Btu for coal gasification projects, equivalent to about 150,000,000 tons of coal input.
[5] Includes 4.0 quadrillion Btu for coal gasification projects, equivalent to about 300,000,000 tons of coal input.

Note: Details may not add to totals due to rounding.

Source: Historical—Bureau of Mines. Projected—S. H. Clark Associates.

Mr. ANDERSON. Gentlemen, my name is Gordon Anderson.

Senator TUNNEY. Do you have a prepared statement?

Mr. ANDERSON. Yes, I have copies of it. I am appearing independently from the Western Oil and Gas Association. I am president of the Santa Fe Drilling Co., a subsidiary of the Santa Fe Corp. I am speaking on the subject of offshore drilling from the viewpoint of the contractor.

I am in complete sympathy with all those who have expressed a sincere concern over the environmental considerations involved in offshore drilling. Santa Fe is a California company and the home offices are in southern California and have been for 27 years.

I was born here and lived here all my life. I would not recommend any action which I believed to be detrimental to our environment. In considering oil exploration, the alternatives are not to have offshore drilling or clean beaches.

My experience indicates we can have both. The real issue is whether we should develop the offshore resources with the skill and technology at our demand or whether we will be more dependent on foreign sources of oil supply.

There is no time to decide whether we can explore off California but rather how we can best proceed. Current exploration in the North Sea is an indication of what can be accomplished. The countries bordering on the North Sea, including some of the most advanced nations in Europe, are almost totally dependent on other countries for their oil needs. Our operation in California is moderate in comparison with the North Sea. The climate, adverse sea conditions add to the most challenging conditions encountered by the offshore drilling industry. But more than 600 wells have been drilled in the hostile vicinity.

By 1976, there will be 73 rigs exploring the North Sea reserves and there has never been a major oil spill resulting from widespread activities in the North Sea.

Training and the technology rejected here has been welcome by these countries bordering the North Sea, and most of the drilling there is being done by American rigs under the supervision of American engineers and with our technology.

Our industry today, especially the offshore segments of our industry, is highly sophisticated. The danger of an accident resulting from human error has been reduced. There have been many technological improvements since the 1969 oil spill in Santa Barbara Channel.

We have more sophisticated blowout equipment. Our chokes now in use are able to control well flow and preset pressure. There have been improvements on motion compensators to reduce the motion of the drill pipe through blowout. We have better detection instruments. We have better trained people. Our offshore rigs whether working in this country or abroad are built to the highest standard of U.S. coastal guides in the American Bureau of Shipping.

These standards require survival and they must remain moored in their floating position while subjected to 100-foot waves and 100-mile-an-hour winds. Some people may have a stereotyped picture of men who drill for oil. Our personnel continue to improve as much as our equipment.

Strong backs and weak minds are no longer adequate. We have professional engineers supervising our proceedings in every part of the world. Santa Fe, like most drilling contractors operating offshore, has training programs for men offshore.

We have in-house studies where we make closed-circuit programs for presentation of drilling rigs. We have sponsors of several technical schools in this country.

I cite the programs because we are representative of what the entire industry is doing. We in the drilling industry assure you we are concerned about our environment. We recognize the problems that face the industry and the dangers inherent in the operation. I am not telling you we can drill for oil anywhere, especially offshore, without risk, but the risk has been reduced and with the world political and economic situation as it is, there is less risk in drilling than not drilling.

It is time we took a positive attitude. Let's not spend our time convincing each other the task is possible. Let's get with the task we feel must be accomplished.

Senator TUNNEY. Thank you. Mr. Fox?

Mr. Fox. My name is Stark Fox. I am executive vice president of Independent Oil and Gas Producers of California, which as the name implies, is a trade association of independent producers of oil in California. Its membership accounts for approximately 20 percent of the State's production.

If I may be permitted to stretch the meaning a little, I appear here as an amicus curiae, a friend of the court. Put another way, I am a disinterested interested party. Disinterested because none of the companies for whom I work is financially capable of participating in the Outer Continental Shelf program. They all have white chips, some of them have red chips, but none has the blue chips necessary to participate in the development of offshore oil resources.

Interested because it is as certain as it is certain that I am here that this Nation desperately needs all the domestic oil it can develop and produce. It is also certain that the development should start right now,

if utter dependency on utterly undependable foreign oil sources is not to eventuate.

At this very moment, our imports of crude oil and its products are averaging nearly 6 million barrels per day, according to the latest weekly report of the Federal Energy Administration. Of this total, 877,000 are coming into the west coast.

Thus imports now equal 37 percent of national demand and 38 percent of west coast demand. The only way continuous growth in imports can even be slowed is for us, as a Nation, to develop every single source of indigenous energy we have, and that most certainly includes the oil resource off southern California.

I have read the analysis Sherman H. Clarke, Associates prepared for Western Oil and Gas Association. The most important conclusion, to me, to be drawn from that report is that for the period to 1990 oil is going to be the swing fuel. That is, after giving full consideration to the contributions to energy supply by coal, gas, hydropower, geothermal, nuclear, solar, and other exotic sources, the burden of filling the gap between supply and requirements will be on oil.

Forecasting is an inexact science, as the Clarke people point out, so that no one can tell with pinpoint accuracy what the total demand for energy will be nor what part of it can be met by domestic sources, but every student of the subject agrees that at least until 1990, oil will be the major component of the energy spectrum. That oil must come from somewhere. My sincere belief is that as much of it as we can get should come from domestic sources.

At the moment there is a world-wide oil surplus, estimated at about 1 billion barrels per day by the Federal Government and 3 million by the Saudi Arabian oil minister.

One unusual characteristic of the surplus is that it has had little if any effect on prices. In fact, the governments of the exporting countries have recently announced increases of from 22 to 33 cents per barrel.

I have said that price action in the face of the surplus is unusual, but that is not its most disturbing feature. What concerns me, and what should concern every citizen of the United States, is that the surplus exists only by the grace of the exporting countries, some of whom have already cut their production levels.

I do not pretend to know why the exporting countries as a group have let the surplus develop, nor why they let it continue. I do know that they have demonstrated their power to do exactly as they please with their oil. Thus the surplus could disappear almost literally overnight, and despite recent news reports out of Washington, the United States could do nothing about it unless we want to return to the days of gunboat diplomacy, and I am not so sure that even that would work.

In any dispassionate view of the near-term—to 1990 at least—energy scene, oil is in the foreground. In any dispassionate view of the energy scene in light of present world oil conditions, domestic oil should be foremost in the foreground. It may be unfortunate from the point of view of some environmentalists and ecologists that some of that oil is offshore southern California rather than in the middle of the Mojave Desert, say, but oil is where the good Lord put it, not the oil industry.

Much time has been wasted, and it is still wasting. For the sake of

the Nation, we had better get on with the job of developing it, no matter where it is.

Senator TUNNEY. Thank you. I appreciate your statement, Mr. Fox. Mr. Anderson, I was interested in your reference to the development of the North Sea. It is my understanding that in Scotland prior to the time there was any development of the North Sea oil and gas resources, there were coastal zone management commissions in place and operating, and as a matter of fact, there was a delay of quite a few months in the drilling until the planning agency requirements had been met by the oil companies.

It is also my understanding that the oil companies have provided many millions of dollars to local governments in Scotland for the purpose of assisting them in their planning activity. As a matter of fact, it is my understanding there is approximately $100 million provided by the oil companies for that planning component.

I wonder why it is the oil companies have not in this country, say in southern California, made the same offer to provide money for a planning component, for instance, to assist us with our State Coastal Commission activities?

Mr. ANDERSON. I am not prepared to comment on that. Perhaps some of the other gentlemen are more adequately informed of such an area. I am unaware of what was done by the American oil companies in the North Sea area.

Senator TUNNEY. You are aware that various counties in Scotland had planning commissions in place before the drilling started? Were you aware of that?

Mr. ANDERSON. No. The role of our company is a functional role and it is drilling for oil. The oil companies are clients of ours.

Senator TUNNEY. Mr. Clark, do you have any information?

Mr. CLARKE. No, sir; I do not.

Senator TUNNEY. One of the things that is of great concern, I think, to all of us, is not only the question of the safety of the drilling itself and the preventing of spills but also the onshore infrastructure that has to be built in order to service the drilling rigs offshore.

I wonder if you would care to comment, Mr. Fox, if your association has given any consideration to those problems that are so closely associated with any offshore drilling program?

Mr. Fox. Mr. Manning can answer that better than I can. However, I will take a shot at it. My understanding of the proposed offshore development here is that the resulting production will in all probability go to a large extent to present refining centers. In other words, it will not be necessary to build and construct or erect, or whatever, a great number of additional refineries to be specific. Much of that oil, if not most of it, will be transported to refining centers now in existence in the State. So, the infrastructure, as you characterize it—sure, there will be some addition, no doubt about that. But to envision such a thing as a shoreline with a refinery every 50 feet because of this new production is quite exaggerated.

Mr. MANNING. I would like to comment briefly. California, of course, is a production State and has facilities in existence, a great many of which are on the shoreline for various reasons. Those facilities would function within the offshore area. Also, additional facilities to produce products are not really a function of the offshore devel-

opment as much as they are results of consumer demand or increased demand.

Let's assume the offshore is not developed but we still need 4 million barrels a day in demand, then increased facilities would exist with or without offshore development.

Except for the fact the Coastal Commission will have a responsibility in the future for establishing a plan for the management of the coastal area that is going to encompass any additional refineries or infrastructure whether the source of the oil supply comes from the Midwest, Alaska, or offshore management. We, of course, work with the Coastal Commission on a daily basis because there are many facilities that come within their jurisdiction. Refining, modification of member companies, terminal facilities, have been permitted, explored, denied by the Coastal Commission. We are working closely with the Commission in reviewing and discussing with the staff, in appearing before the various boards, and State commissions, relative to oil matters.

I don't think it is the intent of the Coastal Commission Act to stop activity in California. I think it is to manage it properly. We are working with the Commission on that basis.

Senator TUNNEY. Has your association indicated any willingness to put up money such as the oil companies did in Scotland to help with the Coastal Management Plan?

Mr. MANNING. I presume the companies were complying with a national law, policy or requirement. I don't know if it was——

Senator TUNNEY. Are you inviting such a regulation?

Mr. MANNING. I am afraid not.

Senator TUNNEY. Senator Stevens, comments or questions?

Senator STEVENS. I will have to look it up. My memory is that the arrangement in Scotland is similar to the one in Cook Inlet. The oil industry prepaid the taxes that would be due our local government for 10 years, to enable them to have the money to take care of the coastal zone management concept there. That was after the discovery. It wasn't preleasing. It was the developmental period we were involved in.

I am interested in your analysis. Conflicts a little with some of the projections I have seen. It is a little less optimistic in terms of the demand structure here. It indicates there wouldn't be a displacement of some of the imports that could be reassigned to some of the other places in the country and is more pessimistic as to your demand/supply picture here. Is that a recent study you have done?

Mr. CLARKE. Yes, sir. Just completed a few months ago. We tried to incorporate in our evaluation, conservation, to the extent we think it is going to be realized. We tried to take the practical economics into account, time lags in getting new legislation in terms of insulation or anything like that. These things are desirable but they take time. However, recognizing these, we have reduced the growth rate in demand from 4-plus percent a year down to about 3 percent in total energy. Our oil and gas combined in southern California, we have a growth rate of only 2.5 percent.

I don't think we have an exceptional supply/demand forecast. Our supply is perhaps pessimistic. I have the benefit of working all over the country and world, in foreign countries, with geologists and so on

and the view of the resource base in the United States and Canada and literally throughout the world, is in a trend of decline.

We are anticipating there is less there than we thought 10 years ago or 5 years ago. Perhaps we reflect the pessimism as to how much can be found. We think it is true that it will take a long time to develop the resources, and the response will be far lower than many people stated.

I have done a study in Canada. Price elasticity of supply for the first 5 years is less than 0.1 with their production peaking by 1976, and if their prices don't rise dramatically soon, they will be on a decline within 2 or 3 years.

Costs are going up rapidly. I notice you said the price was just about right. I am afraid the costs are going up twice as rapidly with inflation, and we will have to have a real increase in price if we are to get all the oil that is available.

Senator STEVENS. You are looking at that in terms of actual cost-related increase and not a price increase to retard demand?

Mr. CLARKE. Yes, sir; absolutely. I don't agree with putting an exceptional tax on energy use. You have to think of the economic activity when you are doing these things and we have already experienced real problems this year.

We have declining real disposable income. Our problems are partially energy-related. We will kill the economy if you try to do things in too extreme a manner.

We don't have alternative things to do with our people. You have seen the analysis of Hudson-Jorgenson where they talk about much lower rates in energy use if you turn them to services. What services? This is a basic question we are faced with. It takes time to make basic changes in the economy. As far as we can see through 1980 and 1990, we will need a growing energy use and we will have a tough time providing the adequate supply from domestic sources.

Senator STEVENS. Mr. Manning, I meant no disrespect to your industry when I said they don't have the ability to go offshore, and I appreciate your stating it categorically. I think we should realize the impact of drilling offshore. It is no longer $150,000 a well. It cost $3 million for drilling a dry hole in my state last month, and it is not something you can do as easily as the old wildcat days.

Mr. MANNING. In line with the comments about the voluntary contributions in the North Sea, in a sense the development of this environmental assessment is a planning function we are conducting to deal with the environmental problems and to be able to state clearly what we anticipate, and also we have committed ourselves voluntarily to spend substantial funds in terms of oil co-ops which would be greatly expanded in southern California.

Mr. Fox. Senator Stevens, I don't want to misquote you so I will try to get you, and you correct me if I am wrong, but I think earlier you commented to the effect that you thought the price of oil was too high. Am I correct?

Senator STEVENS. I think the world price of oil is too high.

Mr. Fox. World price of oil is too high. A couple of minutes ago you said it cost $3 million to drill a dry hole in Alaska. Where is that $3 million coming from, multiplied by however many times you want to multiply? Where is it coming from if the price of oil is not high?

Senator STEVENS. If it is cost related, we will have to pay it, but if it is based on a potentate over in the Middle East, that is what I am talking about. If we use their prices in setting our own, we are wrong. If the industry demonstrated increases are needed because of cost and inflation, that is a different matter.

When I went to Congress, foreign oil was $1.67 a barrel. The increase has nothing to do with economics. It is due to foreign government fiat, and we can't afford to let our pricing mechanism be based on their decisions. There were some that said let it flow to the world price.

Well, it is temporary now, not cost related.

Mr. FOX. Do you think in view of the fact that it cost $3 million to drill the dry hole, do you think the price of domestic oil, U.S. crude, is exorbitant?

Senator STEVENS. At the current level of $7 a barrel, no. Keep in mind that the people drilling a $3 million hole thought they would be hitting a $6 million barrel well; that would be a cheap investment.

If we could keep out the foreign oil today, we would still have gasoline at 40 cents a gallon.

Mr. FOX. We are selling it at 40 cents a gallon and paying 14 cents in taxes.

Mr. MANNING. Senator, we appreciate appearing and the courtesy of your staff in Washington and here in California.

Senator TUNNEY. Thank you very much. I appreciate your being here. There is one witness that has indicated that she would like to testify and that is Mrs. Johanna Hofer, who lives in Los Angeles and is a member of the Sierra Club. Mrs. Hofer, you have 5 minutes.

STATEMENT OF JOHANNA HOFER, ARCADIA, CALIF.

Mrs. HOFER. I do live in Arcadia, California. I would like to mention something to you, gentlemen, first. There was someone sitting to my left, a gentleman, and Senator Stevens said, "I am going back to God's country," and I said, "Where does he mean, Alaska? He couldn't mean Washington. That is the devil's country."

Senator STEVENS. We get out once in a while. I am going to Alaska tomorrow morning.

Mrs. HOFER. I live at 875 Monte Verde Drive, Arcadia, Calif. I am a member of the Sierra Club, but I appear today as a very concerned mother, wife, and citizen.

I believe ecology and humanity are synonymous, there is a lifeline between the two.

Man has progressed through the ages from caveman to controller of the giant computer, and he has reached the Moon with the help of solar energy. We also know that solar energy is limitless and that when the Sun becomes extinct we close the book of time and mankind. Why is it that we have been so reluctant and slow to pursue this most natural form of energy?

Although I am neither scientist nor engineer, I know in my heart, and so do most of you men and women in this audience, that man does not live by bread alone. Let us add to this cliche, industry and transportation do not and need not function by oil alone.

You gentlemen from Washington and in industry know that in the U.S. Patent Office many marvelous and miraculous patents lie buried

because of the selfishness and greed of a few. How much happier and healthier we could all be if we would learn to let faith, hope, and charity guide us in our decisions, instead of lust, greed, and hypocrisy. We reap what we sow.

During the Holy Year in Rome, as my twin sister and I were leaving by train, we met an Italian engineer who said he was traveling to Los Angeles to study the control of smog.

During this same period of time, we had a neighbor in Hollywood whose hobby was tinkering with the Stanley steamer. After almost 25 years, we still have smog and what has happened to the Stanley steamer or reasonable facsimile?

Let us all be very candid today in light of the Watergate era, let us get all the facts straight and let us ask ourselves just how necessary is it that we further mutilate our shores when God has given us humans here on mother Earth so many other alternatives.

Let me just leave you with these words—I will leave my prints upon the sands of time, for injustices to humanity are and shall always be a crime.

Senator TUNNEY. Thank you, Mrs. Hofer. There was a gentleman earlier in the day who indicated that he would like to be heard, who was representing a hydrogen energy proposal? Is he present?

[No response.]

Senator TUNNEY. I guess he didn't want to be heard. One thing we have certainly learned today is there is disagreement between some of the Federal agencies, the FEA on the one hand, the Department of Interior and Commerce on the other and I think that the disagreement, as I understand it, related to whether or not we ought to have a completion of the California Coastal Commission Report prior to the time that the leasing program announced by the Department of Interior is undertaken. It seems to me that it is most important that we delay any drilling off the coast of California until that coastal commission report is completed and that there can be a cooperative effort between the Department of Interior and State and local governments as well as the coastal management commission so that we will not adversely impact the environment of the coastal areas or the lifestyles and living patterns of the people who live in heavy concentrations along the southern California coast.

It would be my hope that action could be taken by the Congress expressing an opinion, at the very least, to accomplish that result and I recognize that the Department of Interior has certain responsibilities, as it sees them, to develop the offshore area.

However, I can't help but feel, listening to the testimony, that the Department of Interior's plan for leasing our offshore areas was developed in a vacuum. At least, it was not a cooperative coordinated participation of the State and local governments that was envisioned by the Congress when the Congress passed the act which provided for the management of our coastal areas nationwide.

I think that we have demonstrated as a result of these hearings today that it is possible for various viewpoints to be brought out in a single forum, and where those viewpoints are articulately expressed, to develop a plan which is going to accommodate the entire interests of the American people, not only the interests of the development of energy which everyone recognizes we have to have in future years in

greater amounts than we now have, but to also acccommodate the quality of life that all of us in this country, I think, recognize should be a part and parcel of government decisionmaking.

I would hope tomorrow with additional witnesses that we will be able to learn more about the program for drilling that has been announced by the Interior Department, what factors did the Department of the Interior take into account when they announced their plan and to learn a bit more about what the State's responsibilities were in assisting the Department of Interior as they were, in the planning stages, planning to announce their drilling program.

I want to thank you again, Senator Stevens, for being here. It is a long way from Alaska and Washington and I know that people in this State appreciate your making this very wide detour.

Senator STEVENS. Thank you very much.

Senator TUNNEY. We will reconvene in this room at 9:30.

[Whereupon, at 2:47 p.m., the hearing was adjourned, to reconvene at 9:30 a.m., Saturday, September 28, 1974.]

THE STATE ROLE IN OUTER CONTINENTAL SHELF DEVELOPMENT: THE CALIFORNIA EXPERIENCE

SATURDAY, SEPTEMBER 28, 1974

U.S. SENATE,
COMMITTEE ON COMMERCE,
NATIONAL OCEAN POLICY STUDY SUBCOMMITTEE,
Santa Monica, Calif.

The subcommittee met at 9:30 a.m. in the Civic Center Conference Room, Santa Monica, Calif., Hon. John V. Tunney presiding.

Senator TUNNEY. The hearing will come to order.

Today we will be hearing from Mr. David Lindgren, Deputy Solicitor, Department of the Interior; Monte Canfield, Energy Specialist of the General Accounting Office, and then a number of environmentalists who have some very sincere feelings about the development of the oil resources of our coasts.

Unfortunately, Senator Stevens had to leave for Alaska and is not able to be with us. Houston Flournoy and Jerry Brown sent their apologies, saying they would like their statements included in the record. Apparently, they feel they have some vineyards they have to be working in today, rather than attending our hearing. Their statements will be included in the record.

We would call as our first witness Mr. David Lindgren, Deputy Solicitor of the Department of Interior.

I want to thank you, Mr. Lindgren, for coming from Washington to be with us today.

VOICE. Can't hear you.

Senator TUNNEY. Are the mikes not working?

Please proceed, sir.

STATEMENT OF DAVID LINDGREN, DEPUTY SOLICITOR, DEPARTMENT OF INTERIOR; ACCOMPANIED BY KING MALLORY

Mr. LINDGREN. Mr. Chairman, it is a pleasure for me to be here and attend the hearing. I am accompanied by King Mallory, the Department's Deputy Assistant Secretary for Energy and Minerals.

It is a pleasure for me to appear before this committee today to discuss the relationship of Outer Continental Shelf resources to the Nation's energy problems, with particular emphasis on possible oil and gas leasing offshore southern California.

At the outset, Mr. Chairman, let me underscore the words "possible leasing." The Department of Interior has not made any decision to begin leasing off the southern California coast, either next spring or at any other time.

The Department is, however, giving very serious consideration to such a sale. Accordingly, a number of environmental and other studies are being prepared, including two related environmental impact statements under NEPA. These studies and others by the Federal Energy Administration and State of California agencies will allow a sound, informed decision to be made that takes into account all relevant considerations. The decision whether to lease and what areas, if any, to lease has not been made and cannot and will not be made until next summer at the earliest. And, any decision to lease will be made, only if leasing can proceed with full protection to the environment.

The reasons why at this time—rather than later—the Interior Department is giving such serious consideration to leasing offshore southern California and the importance of the petroleum resources of that area can best be understood in the context of the national energy and petroleum picture.

The United States is currently importing 6.4 million barrels of oil per day at an annual cost of $23 billion. This amount could increase to as much as 10 million barrels of oil per day in 1988 at an annual cost of $36.5 billion at a $10 per barrel price. Vigorous conservation measures may reduce these figures significantly, but even with such conservation measures, all realistic estimates project an ever-increasing amount of oil being imported into the United States without significant increases in domestic production.

It is in the national interest to reduce this existing and projected rate of imports for at least two reasons. First, as events demonstrated last winter, independence in our foreign policy can be jeopardized by control or attempted control over critical commodities. The recently reported statement by an assistant secretary of the Arab League to the effect that oil is "a legitimate weapon for the Arabs to use," suggests this concern is not at all illusory.

More recently, we have seen threatened additional price increases, production cutbacks by Kuwait to maintain high prices, and impending further nationalization of American firms operating in foreign countries supplying American markets. All these reinforce the need to increase our energy and crude oil self-sufficiency.

Second, the importation of high cost petroleum instead of using domestic sources of petroleum that can be produced at far less resource cost to the Nation continues to have inflationary effects.

In simple terms, the importation of oil requires that, sooner or later, real resources must be transferred to foreign countries. Real resources need not be transferred immediately, however, if oil exporters invest their dollars in U.S. assets such as Treasury bills. This simply gives oil exporters a future claim on real resources.

With the dollar floating in international money markets, the value of the dollar will tend to fall relative to other currencies, if the increased outflow of dollars to pay for petroleum is not matched by an inflow of dollars for real resources or for future claims on real resources. Cheaper dollars will result in an increase in foreign demand for U.S. products such as grain, lumber, and machine tools. This increased export demand will tend to raise domestic prices of U.S. products.

While petroleum produced in the United States will sell at international prices, the transfer of real resources to foreign countries will

be avoided and the American public indirectly will capture the difference between the domestic cost of production and the international price, through lower taxes permitted by bonuses received for the lease tracts, higher wages, and distributed profits. It is estimated that the domestic cost of production ranges from 70 cents per barrel in southern California to $3.50 per barrel in the Gulf of Alaska.

Therefore, maximum development of domestic petroleum resources is of major importance. In this regard, the period of approximately the next 15 years is particularly critical. During that period we cannot expect alternative energy sources—such as coal gasification and liquefaction, oil shale, nuclear fusion, the fast liquid metal breeder-reactor or solar energy—to make any substantial contribution to the Nation's energy picture in a manner that will reduce projected increases in petroleum demand.

There are several reasons for this: First, while efforts are underway to develop or perfect the requisite technology, we cannot realistically expect that it will be commercially available to make a signficant energy contribution before the end of that period.

Second, all these alternative energy sources are more costly, on a British thermal unit basis, than oil, even at today's high crude oil prices, and it makes economic sense to first resort to less costly energy sources.

Third, the fact is that our energy consumption is largely geared, technologically, to the use of petroleum and natural gas—for example, they now provide 77 percent of the energy we consume. Coal can be substituted for oil or gas, with environmental consequences, in existing electric power generation plants, and conventional nuclear plants can be utilized for new installations. Coal can also provide crude oil and natural gas substitutes, and oil shale can provide synthetic crude. But this can be done only at high cost and not in large enough quantities to eliminate increases in petroleum demand during the 15-year period of which I am speaking.

What it comes down to is this: Demand for petroleum will continue to increase; alternative energy sources and energy conservation may slow, but will not halt, that increase. Therefore, the question is not whether we will continue to require oil in increasing amounts; rather it is whether we choose to maximize production of domestic oil and gas to minimize as much as possible reliance on imports or instead forego that additional domestic production and substitute for it imported oil—and there are strong reasons why our national interest requires that we reduce our petroleum imports as much as possible.

Such a reduction—or more accurately, a reduction in the increasing rate of petroleum importation—can be accomplished only by increased domestic production.

Onshore oil and gas production has already peaked, and except for Alaska, we do not expect any more major onshore discoveries. Therefore, over the next 15 years the Outer Continental Shelf offers the best prospects for substantial increases in domestic oil and gas production. The potential for Outer Continental Shelf development, however, lies primarily in the "frontier areas."

Since 1953, approximately 10.1 million acres have been leased in the Gulf of Mexico. With the next three sales in the Gulf of Mexico planned for October 1974, January 1975, and late spring or summer of

1975, the majority of large prospects will be leased. The most promising frontier areas outside of the Gulf of Mexico are southern California, the Gulf of Alaska, Georges Bank off New England, and Baltimore Canyon off the Mid-Atlantic States.

Pending litigation—*United States* v. *Maine*—before the Supreme Court precludes initiating at this time actions leading to a sale in the Atlantic in the near future. Further, while it is believed there is oil offshore the east coast, we do not know that oil or gas is present. Because of the potential environmental problems in the Gulf of Alaska and the short field seasons for data collection, a considerable amount of time is necessary to assemble the needed information for a decision to lease that area. Additionally, the physical condition in the Gulf of Alaska, the lack of industry infrastructure, and the distance from markets will result in slower development of those resources.

By contrast to these frontier areas, the resources potential of the southern California Outer Continental Shelf is better known on the basis of extrapolation of data from onshore production and actual ongoing production in State waters. It is estimated that there may be from 1.6 to 2.7 billion barrels of oil and from 2.4 to 4.8 trillion cubic feet of gas there.

In addition, industry infrastructure and basic transportation facilities exist so that production can more rapidly follow discoveries. Thus in terms of resource potential and rapidity in which significant production might occur, the southern California Outer Continental Shelf is very important in meeting the Nation's energy and petroleum needs in the next 5 to 10 years. In fact, of the frontier areas, only southern California has the potential for a significant contribution over that short range.

This is why the Department has such a strong interest in the southern California offshore resources. While, as I have said, no decision to lease had been made, I also do not want to minimize the importance of this area to the Nation's energy situation.

Turning now to where the Interior Department is in its study process—a process that must be completed before the decisionmaking process really begins.

A call for nomination of tracts in the southern California Outer Continental Shelf was issued on January 2, 1974. Based on the responses to that call, consultation with the Department of Defense and other Federal agencies, and input from California official, 297 tracts comprising 1.6 million acres were selected and announced on August 12, 1974. The area encompassed by those tracts represent the area being examined in great detail in the "proposed action" section of the site-specific environmental impact statement that is now being drafted.

The other areas of the southern California Outer Continental Shelf will be examined in the alternatives section of that impact statement. A draft of this impact statement is expected to be completed late this year and public hearings will be held early in 1975. As I mentioned, the decision whether to lease will not be made until at least next summer.

Work on this statement is proceeding parallel to several other Federal studies that the Department believes are complementary to it. One of these is a programmatic environmental statement that is being

prepared by the Department, addressing the acceleration of Outer Continental Shelf leasing to 10 million acres in 1975. It broadly assesses resource potential and environmental conditions on all the continental shelves of the United States. Its purpose is to assess the cumulative effects of accelerated leasing rather than to assess the impact of any specific sale. A draft is expected to be public in October, prior to release of the draft site-specific environmental impact statement for southern California.

Another parallel effort is FEA's Project Independence report that is due November 1. The objective of that report is to outline the basic national energy supply-and-demand situation through 1985 and the major alternatives to deal with that situation.

The Department is working closely with FEA on this study and the key facts are available for inclusion in the impact statement. The FEA report should be public before the draft southern California impact statement is released so the public will be able to review all three documents together.

As the Department studies the impacts of and problems and advantages associated with a possible southern California Outer Continental Shelf lease sale, we are not working alone. We have attempted to bring into our studies representatives of State and local government agencies in California as well as concerned citizens organizations. To that end, last July Deputy Under Secretary Carter and I held a series of meetings with State officials, local officials and, in this room, the public.

We have asked that representatives from the Los Angeles area governments, the Orange County area governments, the California Coastal Zone Commission, and the State Lands Commission be designated to work with us full time while we prepare the environmental impact statement. We have made similar requests of the Sierra Club and the Seashore Environmental Alliance.

In addition, the Department has reviewed and provided factual input to sections of the coastal zone plan at the commission's request. The draft of the energy element of that plan has been distributed. It will be the subject of State public hearings in December, at which the Department plans to appear, and the final version is expected next spring.

The Department believes that, with a common understanding of the basic facts that hopefully will emerge from these and similar cooperative efforts, that it is not necessary that all Federal action adjacent to California's coast cease until the coastal zone plan is completed.

First, the major assembling of facts for the State plan will occur during that period that the Department is drafting its environmental impact statement. Definitive conclusions and recommendations by the regional commissioners are to be made to the State commission by April 1, 1975, and State activities concerning the plan during 1975 appear to be primarily review, compilation, and development of policy guidelines or recommendations.

We therefore believe that we will have the full benefit of the California coastal zone studies and the recommendations of the regional commissions, who are most directly concerned, before any decision is made as to whether, where, or how leasing should occur on Federal offshore lands.

Second, whether the plan submitted by the Coastal Zone Commission to the California Legislature will be adopted and implemented or modified will not be known until the conclusion of the 1976 regular session of the legislature, at the earliest.

Third, the California State and local governments make the specific decisions as to pipeline locations across State-submerged lands and those cannot be made until after discoveries are made and specific development plans for these discoveries devised.

Thus, development plans will not exist until after the State's coastal zone plan is completed, and the decisions that the State or counties must make affecting the coastal zone will not be required until the plan is developed and implementation is underway.

On the other hand, if the Department should halt drafting an environmental impact statement at this time and wait for adoption of the coastal zone plan, a sale could not be held before late 1976 or 1977. This would result in a delay in increased domestic production obtainable from the southern California Outer Continental Shelf, and we instead would be required to substitute imports from Middle Eastern or Arab countries.

I have discussed how we are proceeding to study and bring together all relevant information to allow a decision to be made as to leasing offshore southern California, and why we are proceeding in that direction. The State and its government subdivisions, have a vital role in that process, both because decisions as to pipelines, refineries, and terminals are within their province and because they are concerned with and affected by any leasing decision that is made.

Close cooperation, consultation, exchange of date, participation in studies, and sharing of viewpoints are not only desirable but essential to a sound, informed decision. That decision, however, involves the development of resources that are the property of and that can benefit all the people of this country.

While the concerns of and impacts on the people and governments of southern California are important factors in the decision, in the final analysis, the decision must be made from the perspective and the needs of the Nation as a whole.

We believe the cooperative efforts that are underway now, and that hopefully will be even improved upon in the future, will produce a common understanding of the problems, considerations, and impacts involved. In turn, when a decision is made, whether it be to proceed with leasing as proposed, or in a modified fashion, or to impose special conditions on lessees, or not to lease in southern California, the basis for that decision will be fully understood by the affected people in California and throughout the Nation.

Mr. Chairman, that concludes my presentation. I would be pleased to answer any questions you may have.

Senator TUNNEY. Thank you. Mr. Lindgren. Are you in a position to speak for the Secretary, as it relates to policy?

Mr. LINDGREN. Mr. Chairman, I am familiar with much of the Secretary's policy. In terms of making commitments for him on matters that he has not yet decided, I am not in a position to do that.

Senator TUNNEY. I am referring to my letter to the Secretary—or rather, Senator Magnuson's letter to Secretary Morton on September 11, 1974, and he says:

Mr. Secretary, this is to request your cooperation in the upcoming hearings to be conducted by the National Ocean Policy Study on the subject of The State Role in Outer Continental Shelf Gas Development. The hearings are planned for September 27th and 28th in the Los Angeles area. They will focus on the major controversy which has emerged because of the Interior Department leasing of the Southern California coast next spring. Some of the issues include the timing of the decision, vis-a-vis the establishment of a State Coastal Zone management program, the problems of developing Southern California Coast at the present time, in view of the current national energy picture and the need for substantive state and local cooperation. As the coastal states come face-to-face with reality of accommodating oil and gas development of their coasts, the need for resolving some of these issues becomes more acute. For this reason, it is essential that you personally be available to state the Administration's view in this matter. Please let me know if you would be able to attend.

The Secretary decided not to attend. My question is: Are you able to address policy on the issues that were raised in the letter by Senator Magnuson to the Secretary?

Mr. LINDGREN. Yes, we are. Mr. Mallory is one of the policy officials of the Department. I am one of the legal officials of the Department, and we are aware of the Department's actions and the Secretary's position. And so we are able to address the issues that were raised in Senator Magnuson's letter.

I believe, in my presentation, I had touched on all of the items which he had raised.

Senator TUNNEY. Fine. I wanted to be sure you would be able to address the problems from a policy viewpoint. And I did not want to waste your time or my time by asking you questions you could not answer because you had not been authorized to answer those questions.

Mr. MALLORY. Let me emphasize, if I might, that the Secretary would have liked very much to personally answer your questions. He is involved, as the chairman of one of President Ford's committees on the conference on inflation, which occurred yesterday and today in Washington.

I am sure you will recognize that is a very important role also.

Senator TUNNEY. Certainly. What I would like to know is whether or not the Department of Interior is aware of the reaction that the Department's announcement incurred in California when they said that they were going to lease 1.6 million acres of offshore lands?

Mr. LINDGREN. Senator, first, the Department has never said that it was going to lease 1.6 million acres of land offshore California or any other amount.

The Department has never said it. The Department has said that it is giving serious consideration to such and that it is studying all of the ramifications, the environmental consequences, and so forth, of that.

We have repeatedly made that statement. No decision has been made at all. As to the state of our awareness of the reaction to the various announcements, we have made and the reaction generally to the proposition of possible offshore leasing. I believe that we are aware of the reaction in southern California and I think that reaction cuts across the whole spectrum of that particular issue.

The Deputy Undersecretary and I were out here in July. We met with State officials in Sacramento. We met with Mayor Bradley and other officials of Orange County and Los Angeles County governments in the city hall.

We held a very lengthy public meeting with members of the public who are concerned, in this room, in which we did receive very strong

reaction. As I say, I think we saw one perspective and as I understand it, the reaction in this area does cut across the entire spectrum.

We are certainly aware there are many concerned citizens that have strong opinions against offshore leasing.

Senator TUNNEY. You were with Jared Carter when he was here in July?

Mr. LINDGREN. Yes, I was.

Senator TUNNEY. There was a press report, August 25, in the Los Angeles Times, which dealt with the petition campaign which exists in California to battle U.S. offshore oil leases. In this particular article, it quotes Mr. Carter.

In early July, Jared Carter, Deputy Undersecretary of the Interior Department told public officials of southern California if 10 million people in southern California say, "no," then it ain't going to happen.

Is that still the position of the Department?

Mr. LINDGREN. Mr. Carter was not stating an official position of the Department as much as he was recognizing—I believe he used the words, "the political realities of the situation."

He was using a number which would represent fairly much, a unanimous position of all of the people of southern California. I think he was recognizing his view of the political realities that if everyone in southern California were unanimously opposed, we would not be able to proceed.

Senator TUNNEY. Unanimously opposed? So if 1 person out of 10 million were in favor that would eliminate unanimity?

Mr. LINDGREN. I am trying to respond to what I felt Mr. Carter was saying. He was picking a number which came close to the entire population. No, I am not saying that and I don't think he was saying that if there was one dissenter, so that it was the entire populus less one, that that would totally change the situation.

Senator TUNNEY. I recognize the Department of the Interior, as the law presently exists, has the final decision on whether or not to lease these offshore areas.

However, a representative of the FEA testified yesterday—and I would like to run through the questions and answers with Mr. Ligon. I think it makes interesting reading, and he was speaking for Mr. Sawhill.

Senator TUNNEY. I don't mean to be a prosecuting attorney but I think a greater degree of precision is needed for me to understand it.

Mr. LIGON. I can't speak for the Department of Interior and that is the reason I have real problems.

Senator TUNNEY. Can you speak for FEA?

Mr. LIGON. Yes, sir, I think I can.

Senator TUNNEY. Does FEA feel there should be delay until after the Coastal Plan is completed?

Mr. LIGON. That is the feeling at the present time, yes, sir.

Now, what is the feeling of the Department of the Interior?

Mr. LINDGREN. The Department's position is delay in what? What we are proceeding with is the studies.

Senator TUNNEY. With the leasing.

Mr. LINDGREN. If I might follow through, we are now proceeding with the studies, environmental impact statement, and other studies. We do not believe they should be delayed. Second, we believe that by the time it is possible to make a decision—that is next summer—we

will have the benefit of all of the studies. So, at this time, we do not see that there is a reason to delay a decision one way or the other, pending completion of the State coastal zone plan, its submission to the legislature, and the adoption or modification of it by the legislature.

But I would add that when the time for decision does arrive, be it early next summer or later, that one of the issues that will have to be examined at that time is whether or not the decision should be further delayed.

That is definitely one of the options that is available to the Department at that time. We do not think, however, that the decision to delay should be made now but should be examined after all this material is collected and the studies are completed. Then, that would be a more sensible time to make the decision.

Senator TUNNEY. There is a difference of opinion, in other words, between the Interior Department and the FEA at this time with respect to the coupling of your final decision to the completion of the State coastal management plan?

Mr. MALLORY. I might address that question, Senator. I think that I read Mr. Ligon's remarks in the paper this morning. I didn't have the benefit of hearing them yesterday as I was back in Washington. I am not sure that we can say there is a difference of opinion because I don't know that Mr. Ligon is talking in terms of a decision being made now or a decision being made in the context of NEPA requirements down the line which Mr. Lindgren has outlined. We are under the constraints as the decisionmaking agency of complying fully with the requirements of NEPA and have to do so.

My reading of Mr. Ligon's testimony—the focus wasn't one that appeared to me to be based on when such a decision was made. I was somewhat surprised; the Federal Energy Administration has been more of an advocate of development of that resource, and we have had this option of considering the California coastal zone plan formulation a considerable while ago.

We were happy to see that they were at this time at least addressing themselves to the fact that California was in the process of developing its plan and that the Federal Government would be considering the input into it.

Senator TUNNEY. Well, as you know, the State coastal management plan relates to matters other than just the development of the oil resources off the coast. It also relates to protecting the environmental quality of the coastal areas, not only from oil spills, but protecting the coast from the kind of infrastructure development that is necessary when you have large scale development offshore.

It so happens there are 10 million people that live in the southern part of this State that would be directly impacted by the development which is quite different from the development in the North Slope of Alaska.

The entire State of Alaska has less than 300,000 people. You are talking about a different situation in southern California from Alaska when you talk about impact on people as a result of offshore development.

Now, the Congress in 1972 passed an act called the Coastal Zone Management Act of 1972 and in that legislation there was a section 307. There are A, B, C, D, E, F, G subparagraphs. I would like to

focus on subparagraph C–3. In C–3 of that legislation, or that section, is a provision called the "Federal consistency" provision. In it there is a statement by the Congress: "After final approval by the Secretary of the State's management program, any applicant for a required Federal lease"—meaning an oil company—"or permit to conduct an activity affecting land or water use in the coastal zone of that State shall provide in the application to the licensing or permitting agency that certification that the proposed activity complies with the State's approved program and such activity will be conducted in consistence with that program."

This doesn't come into effect until the State program or plan is completed. So, there is a very significant difference, it seems to me, as to what will be required of the lessee oil companies if there was delay in the Interior Department decision until after approval of the State coastal plan, than that which would exist if you go ahead with the leases prior to the time that we complete our State coastal plan. Would you not agree?

Mr. LINDGREN. Senator, let me approach it this way. First, the act applies to a coastal zone plan that has been adopted by a State and then approved by the Secretary of Commerce. So, we are looking some years down the line.

Second, it applies to an activity affecting land or water use in the coastal zone of that State. Now, in terms of the activities, and I believe you mentioned a number of these that will have the most substantial impact on the people of southern California, the timing of that activity, and I am referring here to the entire support infrastructure that is necessary, the terminals, refineries or expansion of refineries, pipelines—the timing of all of the decisions relating to the location, whether they are new locations, whether they are expansions of existing facilities such as exist at El Segundo, or in from San Pedro and Long Beach, all of those decisions will not be made until the State plan is adopted.

There will not be the facts necessary for decisions to be made, as it looks to me in the timing, until the California coastal zone plan is adopted.

Third of all, those decisions are basically State decisions. They are not Federal decisions. So, there is a limited decision of a lesser impact that we are looking at and that is the decision whether or not to lease.

I think the decision on timing gets to how long it would take if there were a deferral until there is a coastal zone plan that triggers the effect of this section, and what are the consequences of that delay. Those are the things I have addressed today.

We have made no decision. They have to be addressed carefully at the decision time, but there are consequences to delay.

Senator TUNNEY. Consequences of delay to the quality of life for 10 million people or the production of oil?

Mr. LINDGREN. You have both. You have a consequence in terms of domestic production which in turn requires us, if production is foregone, to import. You do have consequences as to the quality of life but I am not certain I would agree with you exactly which consequences we are talking about.

As to the infrastructure consequences, refineries, et cetera, I don't think there is a difference because where development takes place, be

it way out or onshore, those decisions can be made after the coastal zone plan is finished and adopted and they can be made subject to it.

Senator TUNNEY. It is my understanding that the Department of Interior has a contingency plan for the development of the Federal offshore lands, even if the State and local government, all entities in California, will not allow any pipelines or new refineries; that alternative plan, as I understand it, would have a floating separating plant and a means of piping the oil into waiting vessels which will then transport it to refineries along the coast where those refineries presently exist.

Is that correct?

Mr. LINDGREN. Senator, we have no such plan. Obviously, in examining all of the impacts associated with possible oil development and examining all alternatives to not just oil development but alternatives to ways of handling development, if the decision should be made to develop, one of the things we should look at are alternatives to pipelines.

Any sensible, responsible examination of issues requires we look at all of the mechanisms and one is to use a totally offshore facility and not bring the oil onshore in southern California.

Senator TUNNEY. Has there been a situation where you used a totally offshore facility?

Mr. MALLORY. You may be referring to the recent decision by the Secretary in the Santa Ynez unit plan of development where one of the possibilities was an offshore facility. But if you will examine that decision closely, you will find his approval of that plan of development was very, very conditional insofar as any offshore processing facility was concerned, and required a showing at a later time that this would be in the best interests of the Nation.

When you talk about the quality of life of the 10 million people involved, it is a very broad-ranging subject and the Department considers not only their immediate ones but the whole national impact on it and what their quality of life is like, including the lifestyle, as far as the consumption of energy is concerned, of the people in the area.

Frankly, I think that energy conservation is one of the areas we have to examine more deeply in that, and hopefully, the industry and the consumers involved will be much more aware of that.

Senator TUNNEY. Is the Department considering, as far as the plan for the entire coastal area, totally offshore facilities, assuming that the State and local governments does not give permission to build an infrastructure onshore to handle the oil developed offshore?

Mr. LINDGREN. I would answer it was not considering it as a plan. We are looking at it as an alternative but to elevate it to the level of a plan, I think, is inaccurate. We are looking at subsurface production systems. We are looking at all sorts of alternatives. We will discuss them in the environmental impact statement. It will be available for members of the public, people in southern California, so they can look at those alternatives, look at what has been said about the alternatives, to provide input and to discuss various alternatives that should be chosen as well as additional information on alternatives.

Mr. MALLORY. I might emphasize a point Mr. Lindgren made which was by the time any decision event came on, such a plan, if such a plan were to exist, presumably a California coastal zone plan would exist

and the requirements of the act would be applicable to it. Is that a fair reading of what you said?

Mr. LINDGREN. It is a fair reading as to all of the possible onshore facilities, new or expanding. We also feel by next summer we will have the bulk of the input from the coastal zone studies.

Senator TUNNEY. Of course, you keep making that nice distinction having available to you the essence of the California Coastal zone plan as contrasted with having the completed plan available to you.

Of course, the essence of the plan will be available sometime in the middle of next year, May or June. That, of course, would be compatible with your time schedule which was to get the leases out by May of next year, whereas if you had to wait until the completion of the study and acceptance of the study, you would have to wait until 1976, sometime after the legislature had an opportunity to act on it. If you are going to be willing to comply with the policy stated in the Coastal Zone Management Act of 1972, you would have to, of course, wait until after the Secretary of Commerce had approved the plan which could be 1976 or early part of 1977. What I would like to know is this. Let's say the Department of Interior decides they will go ahead with the leasing program. It is going to be probably bonus bid, will it not? Bonus bid leases?

Mr. LINDGREN. I don't believe any decision has been made. Right now, I would assume it would be. We have a royalty experiment coming up and the results of that experiment would be evaluated and whether it would change, I don't know.

Senator TUNNEY. To give me an idea of recent bonuses paid by the oil companies—in your most recent bidding, how much money was paid by the oil companies for their last leases?

Mr. MALLORY. Senator, I don't have the figures. One example that comes quickly to mind is the tract sale offshore Mississippi, Alabama, and Florida, where the oil companies paid $220 million for one tract alone.

Mr. LINDGREN. We have had several sales in the billion and a half bonus range.

Senator TUNNEY. If you have a bid on 1.6 million acres of land off the southern coast of California, it is reasonable to suggest it would be in the billions of dollars that you would get for those leases. How in the world are you going to be able to stop the development in conscience once you have taken the oil companies' money?

Mr. MALLORY. Senator, the oil companies bid on the tracts that we offer and it is rare that they bid on all the ones that are offered, incidentally. The ambit of all the information available to them, I doubt seriously—I don't know how oil companies work exactly—but I doubt seriously an oil company would bid without full awareness of the plans of California and the status of the California coastal zone plan development. I think a distinction that I would impose in there is they are going to discount any bids they give us based on what they feel the State will be involved in.

We are also in the position that before we can make a decision on development, which we distinguish from exploration, most of those people bidding will drill exploratory wells and then come in with a plan for development.

We have to then make another decision down the line and that is a pretty far way away. Until that time, we have no knowledge of the real resources that are out there. I see your point on the fact they are putting up a lot of money, but I think they are practical businessmen and will take into account the State's concern and approach.

Senator TUNNEY. The oil companies may well feel they have the Department of Interior's support, whether the State or local government gives its approval or not, because you would be perfectly willing to consider as an alternative, floating rigs which would allow them to process the oil and transport it to refineries or separating plants as the case may be.

I am just trying to point out as a practical matter and I think that we have to look at the thing pragmatically, you cannot expect to take hundreds of millions of dollars or even billions from the oil companies in your bonus bid leasing schedule and then say, "Well, oil companies, we are not really telling you we have a plan now for you to develop those leases or even that we will agree to the development of it. We are just giving you a hunting license so you can see if there is oil and maybe in the future you can develop it."

That is malarkey and you know it and I know it. I was involved in the Santa Barbara blowout. I know the bonus bids and I know the pressures the oil companies put on and I felt sympathetic with one aspect of their position.

They had paid money to the Federal Government and they say, "Why can't we develop what we have already leased." It was a pretty good argument. Then, the question came, what about the Federal Government paying back to them their bonus bid and putting the whole area into a preserve? As it turned out the amount of money to be paid out was billions of dollars, and it was impossible to imagine the Congress of the United States would vote the money through the appropriations process and the point is, we didn't do it. So the drilling went ahead and development went ahead.

The same is true in southern California, if you go ahead with leasing and get billions of dollars from the oil companies for a hunting license. There will be tremendous impetus to go ahead with the development program.

You know that and I know it.

Mr. LINDGREN. Senator, as to development of leases, if a decision is made to issue leases. Let me first go back to something you mentioned—getting the leasing out by May and whether we are on that schedule.

Our activities are not designed to get leases out. Our activities are designed to allow sound and intelligent decisions to be made one way or the other. The timing is summer at the earliest. Certainly, if that decision is to issue leases, we do expect that on some of these leases—and the some depend entirely on where discoveries are made—that production of those leases would follow.

Then, you have, I think, something that is a completely different question, the question of what kind of support processing facilities are put in southern California and where. It depends on the location of the leases that may be issued. We have tracts ranging from the most controversial ones of southern California, offshore Santa Monica Bay, to those on the other side of San Clemente Island. Certainly, I am not

saying, and we are not saying, that once we issue the leases, well, it is still anybody's guess as to whether the leases will be developed or whether we will allow the leases to be developed.

Assuming there is discovery and again, we don't know where they will be—on the Mafla sale there have been no discoveries.

Mr. MALLORY. On a $220 million tract, they drilled a dry hole recently.

Mr. LINDGREN. Following the leases, then there is exploration. The company has to get a permit for exploration and then have to submit development plans. The development plans and the methods of development have to be approved.

Again there is a point of control to assure the development occurs in an environmentally sound, acceptable way, and in a safe manner.

I am not going so far as to say a lease is not a lease.

Mr. MALLORY. His point is what I am trying to say, Senator.

Senator TUNNEY. I think we understand each other, that once you go ahead and accept substantial amounts of money from oil companies on a bonus bid or lease, you are going to find an environmentally sound way to let them develop it.

Mr. LINDGREN. I think more, if we make the decision to proceed, that we will have formed the judgment that they can be developed in an environmentally sound way. Before that decision is made, that question will be examined very carefully; but if that decision is made, in that direction, that will be one of the components of that decision.

Senator TUNNEY. Isn't it true the oil companies would much rather drill in the Gulf of Alaska?

Mr. MALLORY. There was a ranking, Senator. I don't recall it offhand. The Gulf of Alaska, much like the North Sea, has serious climatic problems and a limited working period that warmer climates don't.

Senator TUNNEY. You mean environmental hazards?

Mr. MALLORY. There are environmental hazards, be it the Atlantic or the Gulf of Mexico even.

Senator TUNNEY. One of the things I have never been able to understand is why the Department doesn't do its own exploration. Are you going to do your own exploration? Is there a new policy being formed to do your own exploration?

Mr. MALLORY. We are examining the possibility of doing our own exploration. I have not looked closely recently at the legal authorities. I am not sure we have the authority from Congress to do it ourselves. I can tell you we have considered this as one direction we could go.

Mr. LINDGREN. We operate under the Outer Continental Shelf Land Act of 1953 and the basic policy set forth by Congress in that act is that exploration and development should be done by the private sector of the United States, not by the U.S. Government itself.

That is a basic congressional policy we are operating under at this time.

Senator TUNNEY. So, you say you don't have the legal authority to do your own exploration?

Mr. LINDGREN. To do our own exploration, to contract for exploratory work to be done for us would require additional authority from Congress; that is, it would require additional appropriations. From what I understand in this field—and it is getting to be a technical

field—we would be relying to a large extent on the same expertise that industry uses; the U.S. Government does not itself have expertise internally to go out and do this. More than likely, it would have to be contracted, and there are a limited number of organizations competent in that field.

Senator TUNNEY. It is my understanding there is money in the fiscal 1975 budget for substantial sums for new projects not covered by the 1973 act. Is that not true? Research and development?

Mr. MALLORY. Are you talking about $2 billion R. & D. budget?

Senator TUNNEY. Yes.

Mr. MALLORY. I am not sure how much of that is in the Interior Department budget. A greater proportion has been coal area, coal liquification, gasification, tertiary recovery methods, and secondary ones.

Senator TUNNEY. Will you require subsea completions?

Mr. MALLORY. If I might address myself to that point, Senator, the Secretary recently spoke to that and urged that the technology for subsea completions be developed as rapidly as possible by the industry. It is an area we have substantial interest in.

If it can be done in an environmentally safe manner, we think it is the only way that you will be able to drill in the deeper water areas of 300 meters and do it safely.

So, we are encouraging them to do it and hopefully, we will see the technology for that developed to a point where we think it is environmentally safe to go forward with it.

Senator TUNNEY. Why wouldn't you wait until that technology is developed before you go ahead wiith the leasing program, say, in a place like southern California?

Mr. LINDGREN. Senator, I think much depends on where, in terms of what leases you are talking about. As I understand it currently, subsurface production technology, the type that is being developed now and that is being tried now in the Gulf of Mexico, would not eliminate all platforms.

It has two utilities. One, it would decrease substantially the number of visible platforms if it is utilized in waters of a depth that would allow platforms; and, two, it is necessary in deeper water. The impact statement we are preparing will address the issue of subsurface production systems.

It will describe the problems associated with them, the state of technology, and so forth. I can give you two possible decisions. Let's focus on Santa Monica for a moment.

Two options we have are not to lease there until such time as the technology is available, or to issue leases, but put in them a term and condition, a requirement, for subsurface production systems.

These are, and will be, examined in the environmental impact statement and that is certainly an issue that will have to be closely examined during the decisionmaking process, after the study process is completed.

Senator TUNNEY. Do you favor having bonus money put into a trust fund so if the oil companies are not all allowed to go ahead and develop a lease, it can be returned to them?

Mr. MALLORY. Senator, I have not fully considered the question. The issue generally comes up in sharing the bonus moneys with the coastal States rather than the trust fund for the Santa Barbara context.

Being from Louisiana and admitted to the California bar, I have my own personal feelings on the sharing of revenues but I have no opinion on putting funds in trusts. I do know the appropriations process utilizes the bonus moneys heavily and we are also looking at the royalty approach.

Senator TUNNEY. That is the problem, though. You have men like Roy Ash suggesting that the reason we need to have a lot of leasing is because we need the money and therefore, we will just go ahead with a policy of leasing which is not going to take into consideration the overall social or environmental ramifications of that leasing and the eventual development.

I can't help but personally, as an observation, feel that it would be much better for this country's long-term quality of life of its people, if instead of President Nixon saying he was anxious to see 10 million acres of offshore lands leased, he had indicated that he was anxious to see a 25-percent conservation of energy utilized.

Twenty-five percent would save us approximately 4 million barrels a day which would be vastly more than anything you could get off the coast of California and it would be more than what you get off the coast of California and the North Slope development.

But on the other hand, I suppose that is an approach that is not as exciting as the thought of going offshore and reaping a harvest of billions of dollars worth of leases?

Mr. MALLORY. Senator, your thoughts are very profound and I think very worthwhile. I will only say that you reach the conclusion that—I had the honor of attending President Ford's conference on inflation yesterday and the only consensus that was reached there was that to fight inflation, one of the most effective means is to conserve our energy resources.

This would be the most important anti-inflation measure available. It certainly is a theme that is arising locally throughout the rest of the country.

We had strong conservation going when the embargo hit and perhaps we will have another one, particularly if people like you can keep putting that word out.

Senator TUNNEY. One of the things I am also interested in as it relates now to southern California is why the Department has decided to speed up, expedite the leasing program here as contrasted, we will say, to Florida, Maine perhaps, even parts of Texas and Louisiana. There are some who suggest that the reason you are moving ahead here is that California has not challenged, in court, the U.S. ownership of those lands whereas these other States have.

I am just wondering if you know anything about that?

Mr. LINDGREN. Senator, let me start with the challenge first. California has challenged the ownership of these lands. California lost. In fact, it was a decision of the Supreme Court in the *California* case that was the basis for the decision of the special master who ruled on the case of the East Coast States. That issue has been decided by the Court. There are open issues over exactly where the 3-mile limit rests. The State officials have approached us with a request that we try to resolve these issues as rapidly as possible and we have agreed to address that issue with them and get that issue negotiated out, if possible.

California has challenged it. As far as the east coast is concerned, that case is still in court. The special master came out with his report and his recommended decision about 3 or 4 weeks ago.

That goes to the Supreme Court. The matter has to be briefed before the Supreme Court. We do not realistically expect a decision by that Court until the end of the October term, which would be June of next year.

Until that time, that litigation does preclude us from moving as quickly. There are other things in terms of southern California. Oil and gas development is not entirely new to offshore waters of southern California. We know more about southern California in terms of resource potential and in terms of environment.

Our state of knowledge is much superior in California than it is on the Atlantic, than it is on the Gulf of Alaska, and that is one of the reasons.

As far as the Gulf of Mexico is concerned, we have three sales scheduled for next year, as was mentioned. As far as we can determine, the major prospects are totally leased in the Gulf of Mexico and to move elsewhere is necessary to get us into prospects that have great potential.

That is why we are examining so seriously southern California.

Senator TUNNEY. Of course, there is no State that has the recreation potential that California does for its coastal areas and the number of people living in the concentrated area where there is that recreational potential as does California, which is another factor.

That is one of the reasons we passed the Coastal Zone Management Act of 1972, because we wanted to balance the conflicting need for development, recognizing there would be offshore oil development, with the environmental needs of the people living onshore.

Mr. LINDGREN. We would agree completely with the tremendous recreation desirability of the southern California coast and its future potential, and that is one of the critical subjects we are examining in an environmental impact statement. It is an important consideration that must be weighed in the decisionmaking process.

Senator TUNNEY. The California Coastal Commission had an opportunity to testify through spokesmen yesterday and I was just wondering what the Department of Interior's view is regarding the consultation that they had both prior to the decision to announce the beginning of the various steps that had to be taken toward the leasing of the lands offshore, and subsequent to the announcement that you were initiating the process to lease 1.6 million acres.

Mr. LINDGREN. Senator, I am not aware of what the representative of the coastal zone commission testified to. My own feeling on the state of consultation is that what we have had so far has been helpful. I think it has improved our understanding of the issues that are involved and of the viewpoint of the people in the agencies within California, and I think it has improved also the understanding by the State agencies, including the coastal zone commission, of some of the national considerations that are involved in this decision.

I would not say that I am by any means yet satisfied with the state of consultation and cooperation. I think there is room for improvement. We believe that is very vital.

With that does come a much clearer understanding of all of the ramifications of possible development and I certainly look forward, with the Department, to greater cooperation. We have asked certain representatives to work with us. Some of them have apparently been hesitant to work with us on the environmental impact statement because they believe somehow they put their blessing on it, or their stamp of approval, by working on it.

We are not asking that. We are seriously looking for technical information or input if they have it.

I think that kind of reaction has been unfortunate because it doesn't give us the exchange of views and information that is vital to this process.

Senator TUNNEY. I can only say this. Yesterday we had the opportunity to listen to a number of State officials testify. We had the opportunity to hear representatives of the State coastal commission testify, and they are most unhappy about the failure of the Department of Interior to solicit their views before the announcement of the leasing schedule, and they feel there was no consultation and that the Federal Government is running roughshod over the interests of the people in the State.

As a matter of fact, the assembly passed a resolution saying there should be delay on the Outer Continental Shelf leasing until such time as there was a national energy program formulated.

That demonstrates how seriously the State legislature feels about the issue. I would like to know what, specifically, are you going to do in order to improve your consultation with the State agencies? It is so easy and I am not trying to pin you down as to what Secretary Morton is going to do personally.

But I am asking you what the Department is going to do to take concrete steps to improve this relationship between the local and State governments and the Department of Interior.

Mr. MALLORY. You have hit on the problem. We feel we have to take attack and we have been giving serious thought to it. Several concepts are being considered in the Department. I think one of them is the appointment of Outer Continental Shelf coordinators in the States to be affected. We have appointed a committee headed by one of the senior scientists in the Department to have representatives from the State and local governments, as well as environmental interests and governmental interests, to consider the leasing policies of the Department and the leasing decision.

Another possibility is centralizing Outer Continental Shelf management from the contact level with a coordinator back in Washington and one in each of the areas to be impacted so that this type of feeling will not occur again, and the last is to work like the devil to overcome this kind of feeling.

We want the State input and we have to let them know they have a significant role, and they do. We have to consider all the aspects in drafting an environmental impact statement under NEPA.

Mr. LINDGREN. Senator, we have attempted during the last several, 2 or 3 months, to move as much as we can toward that kind of cooperative effort and that kind of dialog. As I said, there is much room for improvement and we are certainly looking for suggestions from governmental organizations. Through the Bureau of Land Management

in Los Angeles, Mr. Bill Grant has made contact with a large number of governmental and other organizations.

He has been in touch with the California Association of Governments, Los Angeles Regional Planning Commission, the Orange County Beaches and Park District, Planning Departments of Ventura County and San Diego County. He has been in touch with citizen organizations and environmental organizations in southern California.

There is a staff through the Bureau of Land Management here and through the Geological Survey in Los Angeles that is ready and very much willing to meet with as frequently as is desirable or desired by local governmental, State governmental agencies, and so forth.

Senator TUNNEY. Would you be prepared, say, in 2 weeks to submit to this committee a concrete outline of the steps that you are prepared to take to cooperate more fully with the State and local agencies of government as well as the California Coastal Commission?

Mr. LINDGREN. We could provide, Senator, certainly a list of what we have done, some suggestions, and some ideas that we would be open to. I think that to submit a concrete outline of steps we are prepared to take to the extent that anything not on the outline we would not give consideration to, I don't want to foreclose it. We will provide a letter to you on the line you suggest in 2 weeks.

Senator TUNNEY. It doesn't have to be a statement which is exclusive. It would be a statement that would necessarily be inclusive. It would represent things you are prepared to do as well as other things, as time goes by, as it appears necessary to do it.

It would seem to me we ought to have such a statement given to this committee because I can assure you yesterday, we heard from State agencies and representatives of the coastal commission and they are most unhappy, and I do not feel the committee would be doing its job unless we elicited from the Department of the Interior concrete suggestions or steps to be taken to improve relations with the State and local governments and the coastal commission.

Mr. LINDGREN. Would it be possible to obtain from the committee staff the summary of their testimony, particularly because we may get the cooperation they are looking for?

Senator TUNNEY. Certainly. I hope you will be able to sit through some of the testimony that will come up.

Mr. LINDGREN. I will be able to be here for a short time. Our people will be here. I hope I will have a chance to soon read the transcript of the committee hearings. We feel the hearings are very, very helpful to us as well as the committee.

Senator TUNNEY. In your statement, you speak of Interior's parallel efforts with Project Independence in assuring offshore drilling. If FEA feels flexibility should be built into the leasing program to give States the opportunity to get ready for the coastal development that will occur, then I would like to assume that the Interior Department is going to be prepared to abide by this policy.

Mr. LINDGREN. Senator, I am not sure. Again, it is back to the question of Mr. Ligon's statement yesterday; and again, it is not clear altogether in my mind exactly what delays he was speaking to. I would not go as far as to say we would be prepared to adopt whatever policy is in that report.

The report from the factual material that will be in there will give us a very strong idea and a much better picture of the entire national supply/demand picture and where we are going in the future.

As I have suggested in my testimony, that issue is one of the national issues that is very much involved in that decision. We certainly are prepared to give very serious consideration to the policy recommendations that are there, as well as policy recommendations for a number of other agencies.

To say we will adopt it right now, I can't until we know what is in there.

Senator TUNNEY. Is it true the Interior Department has issued a schedule calling for further nominations for tracts to be leased beyond the 1.6 million acres we have been talking about here in southern California?

Mr. LINDGREN. Yes; that is true. There is a schedule which does show a possibility of calling for nominations for further leasing in southern California.

Senator TUNNEY. Beyond the 1.6?

Mr. LINDGREN. Beyond the 1.6 million. I might add that a schedule is not a listing of things that we are going to do but it is an attempt to project as far ahead as we can the possible areas we can move in to obtain production. I think oftentimes people feel it is on the schedule, therefore, we are committed to do that, that there is a decision to do that. It is not the case.

It is a planning tool and nothing more. If I might amplify on the schedule by letter to the committee, it may be helpful.

Senator TUNNEY. We have other questions that we would like to submit to you in writing. We just don't, unfortunately, have the time today. I would like to summarize one thought that I have. You can respond if you like.

That is, it was my understanding the Federal Energy Administration was created to develop a national energy policy and to coordinate the activities of the various agencies so that our country would know exactly what we need in the way of supplies to meet demand over the next 15, 20, 30 years, to the end of the century, perhaps even longer.

I have the feeling as a result of listening to the last 2 days of testimony from the FEA and from the Department of Interior, that the left hand perhaps doesn't know what the right hand is doing.

The FEA is charged with the responsibility for developing a Project Independence. Now, they have testified they are prepared to see flexibility in the leasing schedule. They feel it would be most appropriate to have the coastal commission plan ready prior to the time that any final decision would be made in the leasing.

We have the Department of Interior saying, on the other hand, theirs is the final decision to go ahead with the leasing policy and they feel by the middle of next year, irrespective of whether the study has been adopted by the State and accepted by the Department of Commerce, if they feel it is necessary, they will go ahead with a leasing program because they will know what the essence of that study is.

It means then that the Department of Interior is going to make the final decision as it relates to supply, irrespective of what the FEA thinks is necessary in the way of supply in order to meet demand.

Somehow I get the queasy feeling that despite the Secretary's declarations made about how the FEA was going to be able to coordinate energy policy in the country, we are back where we were before. The Department of Interior on the supply side will make the final decision irrespective of what the FEA thinks about it.

Mr. MALLORY. I certainly hope that is not the situation. My experience is that it is far from that. The Department is intimately involved in the formulation of Project Independence. The task forces on the resource side are almost exclusively chaired by Department personnel and we are involved in the whole process of putting together the blueprint with the FEA.

We are required, in addition, by the National Environmental Policy Act to consider all of the factors that relate to the environment and certainly the policy of the blue print as ultimately adopted by the President is something that we will be giving total and full consideration to.

I think as I stated before in regard to Mr. Ligon's statement, we are not inflexible and NEPA requires we remain totally flexible until such time as the decisions are made.

If you have that feeling, it means we have more homework to do in communicating with FEA and being sure that the intentions of Congress are being carried out as they were expressed in the legislative action.

Senator TUNNEY. Thank you. I can only say that I have the feeling that the reason the Department of Interior is charging ahead on the leasing program is because President Nixon said he wanted 10 million acres leased and you, by golly, are going to get the 10 million acres leased despite the fact he is no longer President.

I would like to believe there will be a semblance of restraint on the part of the Department. I just wish that I could be assured that the Department officials who are making these decisions had read a number of books which have been published in recent years about the impact on our global ecosystem of capital development. Books about oil development, the kinds of oil spills, and that fact we are putting so much oil into our environment—20 times it is estimated over what nature puts in—that oil is having a substantial impact upon the heat and moisture transfer of our ecosystem which could, in turn, be having a serious impact on climatic conditions, monsoons in the sub-Sahara, the problem of polychlorinated hydrocarbons being soluble in oil and not in water, problems with the concentration of DDT and other pesticides in the food chains.

All these are serious problems. I just have the feeling that those individuals making the final decision on leasing and production are unconscious of what this impact is on the global ecosystem. As one human being who wants my grandchildren to be able to live out their lives, I have a sincere personal interest in that, going beyond my responsibility as a legislator, although I take those responsibilities seriously, too.

I want to thank you very much for being here. I wish I could say I were as pleased with your conclusions on some of the questions I have asked you as I was with some of the conclusions that were rendered by Mr. Ligon. I think that his statement representing the FEA position was certainly more sensitive than the Department of Interior

position to the needs of southern California. But I do appreciate the fact you were prepared, the fact you could speak to policy and the fact you came from Washington to be here.

Mr. LINDGREN. We appreciate the opportunity to have been here and I would simply say, we feel we are being sensitive and we are very sensitive to the issues and impact on southern California and the views and opinions of the people and their government here.

I think it is a question of expression and they are very important in any decision and extremely important to us.

Senator TUNNEY. Thank you very much. Sit around for awhile and you will hear expressions of opinion.

[The following information was subsequently received for the record:]

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SOLICITOR,
Washington, D.C., October 23, 1974.

Hon. JOHN TUNNEY,
U.S. Senate,
Washington, D.C.

DEAR SENATOR TUNNEY: This letter is in response to the request you made at your hearings in Santa Monica, California on September 28 for a letter indicating what kind of consultation and public involvement the Department would be willing to consider as it continues with its study of the Southern California outer continental shelf and then proceeds into the process of deciding whether a sale should be held there. In responding to your request, I think it would be useful to review what the Department has done to date in terms of consulting the state and local government entities and the public.

In February, 1974, shortly after the Department issued its "call for nominations" to identify areas of interest for possible oil and gas leases, the Department also solicited comments from all interested parties, including state and local governments, private citizens, conservation groups, etc., as to all relevant considerations involved in such possible leases, including the environmental, technological and socio-economic aspects thereof. In July of this year, Deputy Under Secretary Jared Carter and I held a series of meetings to discuss this subject with State and local governmental officials and the public. The meeting on July 11 in Sacramento included officials from the State Lands Commission, the California Coastal Commission, and the Attorney General's Office. The July 12 meeting in Los Angeles included officials from the Cities of Los Angeles, Santa Monica, Manhattan Beach, Redondo Beach, Laguna Beach, Newport Beach, Huntington Beach, Palos Verdes Estates, and the Counties of Los Angeles and Orange. On July 15 we held a meeting in Santa Monica at which 33 people made statements and asked questions of the Interior officials present. Since then, Department officials have had several meetings with representatives of both the State Lands Commission, the Coastal Zone Commission and members of the California Congressional delegation, and, of course, Deputy Assistant Secretary Mallory and I appeared before your Committee in Santa Monica last month.

As I mentioned in my testimony, in August we also asked the State Lands Commission, the Coastal Zone Commission, the city and county governments of Los Angeles and Orange County to appoint representatives to work full time with us on the preparation of the Environmental Impact Statement for the possible Southern California sale, and a similar request was made of the Sierra Club and the Seashore Environmental Alliance (SEA). We have had meetings with these organizations, as well as with representatives of the Southern California Association of Governments.

In addition, our staff in Los Angeles has requested input from and meetings with all of the following citizen organizations:

Americans for Democratic Action; Audubon Society of Los Angeles; California Citizens Action Group; California League of Conservation Voters; California Tomorrow; Center For Law in the Public Interest; Ecology Center of Southern California; Environmental Alert Group; Environmental Coalition of Orange County; Environmental Coalition of Ventura County; Environmental Data Research; Environmental Education Group; Fisherman's Cooperative Organization; Friends of Santa Monica Mountains & Seashore; Friends of the

Earth; Get Oil Out; Isaac Walton League; League of Women Voters; Natural Resources Defense Council, Inc.; No Oil, Inc.; Ocean Fish Protective Association; Orange County Coast Association; San Pedro Environmental Action Committee; Sport Fishery Association of California; Tuna Research Organization; Wilderness Association.

As to the future, we have definite plans for a number of meetings and hearings. Very shortly, we will be announcing a public hearing to be held in Los Angeles on the draft Environmental Impact Statement covering the entire outer continental shelf leasing program. Public hearings will also be held in Los Angeles on the draft Environmental Impact Statement for the possible Southern California OCS lease sale after it is completed and distributed to the public. In addition, we hope to appear before the Los Angeles City Council on October 30 to testify concerning OCS development, and we also hope to appear at the public hearings to be held in December by the California Coastal Zone Commission. Of course, we will also continue to be meeting with the governmental entities and citizen organizations I have mentioned above as we proceed with preparations of the Environmental Impact Statement.

Thus, we have taken the initiative in seeking meetings and consultations with all of the concerned and affected state and local government organizations in California as well as numerous citizens groups. We expect to hold meetings similar to those we have already had both while the final Environmental Impact Statement is being prepared and thereafter as we consider whether to hold the sale.

I hope this review of what the Interior Department has done—and plans to do in the future—to consult with the people of Southern California and their governments, has been helpful to you.

Sincerely yours,

DAVID E. LINDGREN,
Deputy Solicitor.

Senator TUNNEY. Please proceed.

Nice to have you here. Thank you for being with us.

STATEMENT OF MONTE CANFIELD, ENERGY SPECIALIST, GENERAL ACCOUNTING OFFICE

Mr. CANFIELD. It is a pleasure to appear before you again, Mr. Chairman. The last time I appeared I was deputy director of the Energy Policy Project of the Ford Foundation. I am now director of the Office of Special Programs of U.S. Government Accounting Office.

For the 3 years prior to the Ford Foundation, I was head of Division of Energy and Minerals, Bureau of Land Management.

I appreciate, Mr. Chairman, the opportunity to discuss for the study, some of the issues regarding the proposed development of the Outer Continental Shelf off the coast of California. While the specific issue of further Federal leasing of the California Outer Continental Shelf is the focus of this hearing, I believe it must be viewed in the context of a larger national issue:

How do we, as a Nation, attempt to balance the supply of and demand for energy at minimum cost—not just in dollars, but also at minimum cost to our environment.

As you know, the GAO is involved in a number of reviews concerning the OCS. We are also concerned with your study of national ocean policy, as authorized by S. Res. 222. In particular, we have been working very closely with the National Ocean Policy Study Subcommittee and currently have in process four separate reviews in that area which are being executed on a priority basis.

With respect to the Outer Continental Shelf, we reported last year to the Conservation and Natural Resources Subcommittee of the House Committee on Government Operations that improved inspec-

tion and regulation by the Department of the Interior could reduce the possibility of oil spills—and we made recommendations to the Secretary along these line. In addition, work is now underway to determine if Interior's programs are contributing to maximizing the discovery and development of energy resources both on and offshore. We are considering lease production experience, environmental impacts, and whether the public is recovering a fair return on the disposition of its natural resources.

Each of these efforts is designed to help illuminate both the issues and opportunities associated with the complex of problems surrounding development of a national ocean policy and a national energy policy. The prudent management of Federal oil and gas resources on the Outer Continental Shelf poses issues at the very interface of these important national tasks.

Some of the basic questions to consider here today are: Can we get by in this country without oil and gas from the California Outer Continental Shelf? If not, how soon do we need it? What options do we have?

The west coast as a whole was able to supply about 56 percent of its demand for oil in 1972 and about 50 percent in 1973—and this percentage is expected to go lower. For natural gas, the corresponding number has been about 21 percent both years. And, if we as a nation continue on our historic course of increasing energy consumption at about 3.4 percent per year, in some 20 years, we would double our consumption. To stay on that road would require full development of most of our major energy sources: all of our Outer Continental Shelf resources, plus western coal and oil shale, and nuclear power. And, we would have to depend on imported oil.

Of course, there are options. They are real, they are possible and they could happen. The work of Ford Foundation's energy policy project, whose final report will be published next month, has studied these options in detail. As deputy director of that project, I was able to consider first hand the social, political, and environmental implications of reducing U.S. demand for energy. I am convinced that we can do it.

In fact, by the late 1980's we can even get to a situation that has been called "zero energy growth." We could do this by sharply limiting dependence on fossile and nuclear fuels, using all possible means of conserving energy and increasing the rate of shift of future economic growth to sectors of our economy having low energy consumption. This means decreasing the demand for the more energy intensive activities that we are so accustomed to associating with national economic growth and health. Then, of course, there is a middle way, a "technical fix," which emphasize conservation by squeezing the fat out of our energy consumption, and about which I will be saying more later on.

In fact, under either of the lower growth alternatives, I can say unequivocally that we could do without further leasing of the California Outer Continental Shelf for the indefinite future. And having said that, I must immediately point out that such an action might not make sense from a national point of view. Any decision to develop or not develop any resource only makes sense in the context of weigh-

ing the trade-offs among alternative options. There truly is no such thing as a free lunch.

If we decide to relieve the pressure to drill the Outer Continental Shelf off the California coast a price must be paid. We must either put the burden on other sources and localities—who are no more anxious to develop their resources than are people here in California—or we must all make the hard decisions, even sacrifices, required to reduce consumption. We just cannot stop everything and do nothing. We have only a limited number of options for improving supply and there are trade-offs among those as to costs, environmental damages, and dependability. And while there are greater options in reducing demand, they tend to be difficult to implement because of traditional fears that reduced demand necessarily means reduced economic growth, a proposition incidentally, that I do not believe.

The time frame of these decisions is important, too. We will need to depend mainly on oil and gas for energy in the next 5 to 10 years. Even crash efforts to develop the western oil shale and coal options or to make large increases in nuclear power generation will take at least that long before significant impacts will be felt in reduced pressure for more oil and gas.

If it's going to be difficult to decrease demand and troublesome to increase imports, then we ought to make sure that we drill for oil where it's most likely to be found and least likely to do irreparable damage. Not until we answer some basic resource questions can we really make sensible leasing decisions. For example, what are the potential recoverable resources in this region? How do they relate to regional and national supply projections? What economic, social, and environmental impacts can be expected?

For example, it is impossible to understand the role of the Outer Continental Shelf in the national energy picture without an adequate understanding of the physical data base of the public's resources. If we do not know what we own it is pretty hard to know what to do with it. There is a wide divergence in resource estimates, in part because there has been little detailed geological or geophysical exploration activity, in part also because much of this science is still as much an art as a science.

Official USGS estimates are that the potential for the Outer Continental Shelf off the Pacific coast as against the total Outer Continental Shelf is only about 8 percent for oil and 2½ percent for natural gas. This is not a very big percentage. But industry estimates are much higher, 26 and 25 percent respectively. I submit that decisions on whether to develop the California Outer Continental Shelf should take these enormous discrepancies into account.

In addition, in past lease sales, the Government has depended almost entirely on industry nominations in deciding when and where to hold the sales. With an inadequate understanding of our resources and their potential value, the Government is not in a position to select wisely those tracts to offer nor is it in a very good position to determine whether it is receiving a fair market value return from the sale of public resources, particularly in situations where there are relatively few bidders per tract. We need to improve the level of our resource understanding. We should not lease the Outer Continental

Shelf at so fast a rate that it gluts the market and weakens competition for tracts.

And we must keep in mind that leasing of the Outer Continental Shelf does not mean production. If we were to open the entire Outer Continental Shelf to leasing today, no one would have a clear idea of how much more production could be expected or when. The constraints—lack of rigs, pipe, trained labor, and environmental and legal concerns—all argue against a policy of rapid leasing.

In this connection the House Appropriations Committee in reporting out the Interior Department's 1975 appropriations expressed its concern that, for those Outer Continental Shelf lands which are leased, there be expeditious exploration and development. The committee also insisted on assurances that the environmental impact of proposed Outer Continental Shelf leasing actions be carefully and fully assessed before the leases are made. It also insisted on full public participation and complete knowledge by the Government and the public of the consequences of leasing or not leasing on the relationship between production, consumption, and energy needs.

The committee directed, that prior to expanding its leasing program beyond 3 million acres a year, Interior acquire and evaluate data which would at a minimum, justify the proposed leasing level in terms of: (a) the role of offshore oil and gas in a comprehensive energy strategy or plan; (b) the availability of rigs, material, and manpower; (c) the availability of capital to purchase and develop the leases; (d) the ability of the department's bureaus to administer the program; (e) the effects on revenues returned; (f) the relative environmental risks; (g) the onshore environmental, social, and economic impacts; and (h) the relationship of potential offshore production total reserves, consumption, and energy conservation practices.

Full compliance with the committee's desires in this area would go a long way toward better understanding of OCS leasing issues, and would lead to a more rigorous appraisal of problems and trade offs before final decisions are made than is typically the case.

I remarked earlier about the possibility of reducing the pressure on developing new supplies by considering the potentials for energy conservation. For example, the industrial and commercial sectors of our economy account for about 55 percent of our total energy consumption—this compares, say, to the 20 percent of the total that goes for household use. There is a large potential for saving energy in these sectors, most likely in the four following major categories: (1) more efficient steam generation; (2) waste heat recovery; (3) materials recycling; (4) more efficient building heating and cooling system design.

Large energy savings are also possible in particular industries. For example, in aluminum production a new smelting process has the potential for saving about 30 percent of the energy now used, and savings of about 50 percent appear possible in the papermaking process by reducing water requirements. Interestingly, both of these new energy saving technologies were not the fruit of an energy conservation effort but rather of a need to meet air and water pollution limits. But the main point to make is that savings of 25 to 40 percent are possible in these and many other areas.

Many people argue that we, quite literally, cannot afford to save energy. Recent analyses made by the Ford Foundation's energy policy project indicate this is not the case. From a national perspective, in general, the capital costs for energy conserving technologies are substantially lower than the corresponding capital costs of energy production and processing.

Senator TUNNEY. I would like to stop you there. It is my understanding when you were at the Department of Interior—how long were you there?

Mr. CANFIELD. Two and a half years.

Senator TUNNEY. It was my understanding that you had a responsibility for Outer Continental Shelf development.

Mr. CANFIELD. That's right.

Senator TUNNEY. What was the responsibility?

Mr. CANFIELD. The responsibility in the Department of Interior is split between the Bureau of Land Management and the Geological Survey. BLM reports to the Assistant Secretary of Public Lands who, in turn, reports to the Secretary.

The decision how to operate the leases after the lease sales are held is the responsibility of Geological Survey, who reports to the Assistant Secretary for Energy and Minerals, who, in turn, reports to the Secretary.

Senator TUNNEY. What was your job specifically? What was your title in the department?

Mr. CANFIELD. Title?

Senator TUNNEY. What was the job?

Mr. CANFIELD. Chief, Division of Energy and Minerals. It was my responsibility to develop plans and programs for developing any Federal energy or Federal mineral resource on or offshore owned by the Federal Government.

Senator TUNNEY. You are speaking as a man with considerable expertise in this area when you talk about the capital cost of energy conservation versus development of OCS.

Mr. CANFIELD. I have spent the better part of the last decade worrying about questions of supply versus demand in energy type problems.

Senator TUNNEY. I wanted to, for my own knowledge, and also for purpose of other members of the National Ocean Policy Study, have it known that your statements in this hearing today are based on considerable expertise. Thank you. Please continue.

Mr. CANFIELD. If I may, I would repeat part of the last paragraph. Many people argue that we, quite literally, cannot afford to save energy. Recent analyses made by the Ford Foundation's energy policy project indicate this is not the case. From a national perspective, in general, the capital costs for energy conserving technologies are substantially lower than the corresponding capital costs of energy production and processing. The cumulative capital requirements for industrial and commercial energy conservation measures between 1975 and 2000 would be about $200 billion to $250 billion—in 1970 dollars. To produce the equivalent energy in terms of oil, coal, natural gas, and electricity would require capital costs of about $350 billion. Thus it appears that saving energy also saves money, money which could be invested in public service programs which reduce energy demand even further, such as mass transit and new community development.

But these conservation actions will not be taken without firm national commitments to them. They won't enact themselves and they won't administer themselves. With the embargo lifted the Nation is going back to sleep, and in a real sense the options are being narrowed as the dialog narrows.

For example, if the issue of leasing the California Outer Continental Shelf is described and argued purely as development versus environment, many options are foreclosed simply by the way the issue is framed. Add, however, the issue of balancing national supply with demand, of considering regional supply and demand needs, and factor in other social values. All of a sudden the options open up, including energy conservation. Decisions made in such a broader context, are, it seems to me, by definition, better decisions—no matter which way they go.

If it turns out that more energy supply is needed, as it likely will be, even with conservation, then we must decide how we can tradeoff the likely environmental damages resulting from such things as exploration of Alaska oil and gas or Outer Continental Shelf oil and gas, or Western coal, or spills from tankers carrying increased imports.

In a recent University of Oklahoma technology assessment of OCS oil and gas operations, a comparison was made of the environmental impacts due to increased OCS operations as against increased oil imports and as against the use of the trans-Alaska pipeline (TAPS). That study concluded that the OCS is less of a threat to the worldwide environment than increased imports. If only U.S. waters are considered, imports appear to have the advantage. And, so far as TAPS is concerned, the study concluded that its environmental risks are probably greater than those of OCS development. Such conclusions must, of course, be viewed simply as the "intelligent guesses" that they are since there is no experience on which to base an estimate of the environmental damage of TAPS.

The Council on Environmental Quality has reported on the relative risks of oil and gas development in the Atlantic and Gulf of Alaska OCS. They undertook an analysis which incorporated computer modeling techniques and arrived at an estimate of the overall relative degree of risks to the marine, coastal, and human environment. An extension of such an analysis could be understaken to help get at a ranking of relative risks to include the OCS areas off California which are now in question. One cannot hang his hat on such analysis entirely, but it is better than no analysis. In any event, there appears to be considerable potential for improving the technology of OCS operations to decrease spills, blowouts, and other accidents, and to clean up spills once they occur. But according to a recently conducted study of oil spills in the marine environment which was done for the Ford Foundation's energy policy project, we have a very long way to go in this area.

To summarize then, the pressure to develop new OCS supplies can be lessened by conservation practices which act to decrease demand or to hold it constant. Increasing supply or decreasing demand are like two sides of the same coin.

If it turns out we need to increasingly exploit one or another of our energy resources, we ought to have some way of deciding which is the best bet in terms of limiting environmental damages and in terms of

its being worth exploiting. We have to have a fairly good notion of what is there and what it is worth, and what it will cost to exploit it. And by this I mean all the costs: economic, social, and environmental.

The problems inherent in attempting to accelerate OCS leasing to an arbitrary rate of 10 million acres a year stem from our inability to evaluate fully what is being offered, to obtain a fair value for it, to insure that the development pace can match the leasing pace, and to insure ourselves that we can protect our environment if we do it.

Finally, it seems to me that the kinds of analyses expected to be undertaken under the Coastal Zone Management Act of 1972 and the National Environmental Policy Act of 1969 are precisely the kinds of analysis which must be made if intelligent decisions are to be made regarding OCS leasing.

If it is indeed absolutely critical to the Nation that the California OCS be developed immediately, then such studies must be set aside and the development must proceed apace.

However, let's assume that such analyses could be done in a reasonable period of time, say 1 or 2 years. And let's remember that the development which would follow leasing would be, for all intents and purposes, irreversible. Given these assumptions, I would argue that the burden of proof must rest on those who would proceed with immediate leasing without the benefit of such analyses.

Thank you, Mr. Chairman. I am available for questioning.

Senator TUNNEY. I want to thank you, Mr. Canfield. Yours is a fascinating perspective based on considerable expertise. It is a perspective which I think is desperately needed in our decisionmaking in this area to go ahead with the Outer Continental Shelf development.

I was very interested in the part of your statement where you talk about the constraints, lack of rigs, pipeline planning, labor, environmental, legal concerns, which argue against a policy of rapid leasing.

Are you suggesting because of these constraints that even if the Department of Interior decided to go ahead in mid-1975 with a leasing program that it would still take some months or maybe even years to actually get production in the Outer Continental Shelf off the coast of southern California?

Mr. CANFIELD. It will take 3 to 5 years to get any production to speak of; it will take 7 to 10 years to get intermediate production and then 10 to 12 years for peak production.

Senator TUNNEY. Then what is the rush? Why can't we wait until 1976, until California completes its coastal zone study?

Mr. CANFIELD. As I said, not only can we do it, we ought to do it. It is the sensible thing to do. The problem is the country is caught in a self-fulfilling syndrome. If we tighten belts and conserve energy, we open options up. We may decide in the 1980's or sometime to open new areas of the Outer Continental Shelf. Perhaps by then, we will have the technology and systems that people will be compatible with. We will close the options if we see things in terms of the self-fulfilling demand curve that goes ever and ever upward.

Senator TUNNEY. You served in the Department of the Interior and you had a major responsibiity for evaluating Outer Continental Shelf lease lands, potentially, and you are familiar with the pressures that are on the Departments to open up these lease areas.

Why is it, in your view, that we have this demonstrated rapacious appetite to develop the southern California Outer Continental Shelf when we may not have the rigs and the trained manpower to develop the leases for several years? Why is it? Is it a desire to get the bonus money to fulfill OMB's desire to have more revenue for the U.S. Treasury?

Mr. CANFIELD. I think that is part of it but I really think answers tend to be formulated in terms of what the marching orders that a given institution is operating under. If the institution thinks its job is to lease 10 million acres of Outer Continental Shelf area a year and you look around and you see what you have leased and what the opportunity of development is, you are going to come here fairly quickly. If you visualize the demand curve—and that the OCS is somehow supposed to fill the wedge in terms of supply—it never could. If you assume the demand rises 3.5 or 4 percent a year and you don't assume that you would cut back on consumption, you don't have much choice.

It is in terms of the kind of planning constraints an institution sets on itself when it sets about a program. I say back off and ask ourselves, "Are those really your only options," and hopefully, Project Independence—I think that is an interesting term—but hopefully the analysis which should lead to a national energy policy, will show some options to the Nation and I might say as one of the responsibilities of the office I am responsible for in GAO, we have initiated as of last Friday a monitoring effort of Project Independence where we will not wait until it is over and audit but we will audit on a day-to-day, week-to-week basis what the activities are.

Senator TUNNEY. Including conservation?

Mr. CANFIELD. I would hope so.

Senator TUNNEY. From what you said, it would seem to me any environmental impact statement prepared by the Department of Interior concerning OCS development must include an extensive consideration of conservation strategies as an alternative to the development of oil resources and OCS?

Mr. CANFIELD. Absolutely.

Senator TUNNEY. Has this been something done in the past?

Mr. CANFIELD. It is something that steps are being taken to get geared up to. I can remember when I was there and we were worrying about the trans-Alaska pipeline and whether or not alternatives to that had been seriously considered. We found ourselves in the peculiar situation of not having the talent or expertise to address those kinds of issues.

I think Interior is moving in this direction but that is another critical point. You have got to walk before you can run and it will take time to develop the kind of techniques and tools for evaluating conservation options in a department whose main responsibility by law is to increase supply.

It takes time to do that. As those things are being developed, it seems prudent to go slow in those decisions while you are developing expertise to make this kind of analysis.

Senator TUNNEY. Who has to make the policy judgment? Is it the Secretary of Interior? Is it the President, the Director of the FEA? Who has to make this policy decision that we are going to give con-

sideration to conservation strategies at the same time that we are developing production strategies and development strategies?

Mr. CANFIELD. John Sawhill can make the decision that we must consider conservation as equal to the others in the picture. But he cannot make the decision of whether or not to lease the Outer Continental Shelf. The President could take that decision back, but that decision has been delegated to the Secretary of Interior. It is his decision ultimately whether or not to lease the Outer Continental Shelf.

Sawhill's job is to influence and see to it the leasing program is part of the national package of energy goals, and when the leasing program is inconsistent with those things, to raise the red flag.

He is not going to be prepared to do that before February or March of next year. The Project Independence blueprint to be released on November 1 will at the most have four options in it, four alternative strategies for possible national energy policy. They will be chewed over during the winter months and no final decision as to which strategy to proceed on will be made until late winter, February or March at the earliest.

Senator TUNNEY. Does it make sense to you, for instance, if I should offer a resolution in the Senate calling upon the Senate to express its opinion that there be a delay in the leasing of the Outer Continental Shelf land in Southern California until the State has had an opportunity to complete its coastal management plan? In compliance with such plan, the Department of Interior would have an opportunity to consult with the State officials and the California Coastal Commission and perhaps ensuing that, the national policy statements that were contained in the Coastal Management Act of 1972 and the most recent act, the Outer Continental Shelf Act that passed the Senate last week, that it would be best to delay any leasing program until there was opportunity for full consultation with the State and local government and that there be a State coastal plan which would be considered by the Department of Interior in any leasing schedule. Does such a Senate resolution make any sense to you as a person who has been in the Department of Interior, who knows the ways of that Byzantine bureaucracy?

Mr. CANFIELD. I think it makes sense to do it. I would be sure it was done under a couple of explicit statements in that resolution. One of them is the important statement that the State of California and the people of California have also an obligation to get about the business of completing their plan and I would certainly think it doesn't make sense to say to the Federal Government, "You all wait now until we get around to doing it." Some people don't want to finish it.

That wouldn't make sense. There has to be give and take on both sides. The Interior Department should proceed with intensity in terms of alternatives.

The State should get about the business of completing its plan and there should be some sort of time constraints on all parties.

I cannot fault the Department of Interior for planning for alternative actions. I think it would be a mistake to chastise them on that basis. They are a hell of a lot better off than they were 5 or 6 years ago.

Having them consider all the alternatives and continue with their planning efforts vigorously makes sense in any kind of resolution. It seems to me that such a resolution under these kinds of circumstances

would give a sense of Congress that the Interior Department does not have at this point.

The law is clear. Because of the urgent need for developing the OCS—let's get out and do it. That is the law they have been operating on for over 20 years.

Their mandate has not been changed—even the latest Senate bill talked about the urgency of developing.

Senator TUNNEY. It also talked about the preservation of the coastline. And certainly the 1972 act which related to coastline management expresses very clearly the importance of having coordination between the Federal agencies responsible for developing OCS and the local and State governments and coastal management agencies.

I was interested by your point that only 8 percent of the total continental resources are contained in the Outer Continental Shelf.

Why is it that geological survey has such a limited capacity to evaluate what our actual reserves are and why are they not able to do that kind exploration? Is it because the Congress has passed legislation which inhibits them from doing it? It was suggested that was the case by an earlier witness.

Mr. CANFIELD. Mr. Lindgren is Deputy Solicitor of the Department. His office is responsible for interpreting the legislation under which the Department operates. So, if the Solicitor's office feels they don't have the authority, then the chances are pretty good they won't exercise it.

Senator TUNNEY. They ought to have the authority if they don't have it.

Mr. CANFIELD. They ought to and I am not certain I can point to the line saying they don't. I had testified before Senator Jackson's committee in March, recommending that the Government get about the business of knowing what it is doing and get about the business of developing and exploration and at least bottom hole sampling and getting some of the information on the public record available to the public at large.

Senator TUNNEY. I would imagine that the oil companies would not particularly like that policy approach, would they?

Mr. CANFIELD. I wouldn't think it would be in their personal best interests for a Government to know a great deal more about its resources than they do.

Senator TUNNEY. Is there another country in the world that goes about the policy of developing the people's resources on public lands the way this country does, with the entire exploration responsibility falling upon private industry after a bonus bid has been paid to the Government, which anticipates development after the resources have been discovered?

Mr. CANFIELD. I am afraid there are a number of countries that actually do worse by their public resources than the United States.

Our friends in Canada are really concerned about decisions that have been made over the last 10 to 15 years to lease through concession programs at the province level, large areas of Canadian coal resources for a minimal amount of return, 5 or 6 cents on the ton.

In a number of developing countries, as you know, they issue large concession blocks in terms of return on the investment of royalty sharing and things like that.

I think we do better than most countries. I think we don't do nearly as well as we could do. I think we could do enormously better. Britain and Norway do it well in terms of knowing what they are doing in developing the North Sea.

Senator TUNNEY. That is a good example. It is my understanding that prior to the time that the companies were actually allowed to go out and start drilling in the North Sea, there had to be compliance with a coastal management plan or plans developed in Scotland and those plans were in existence and operative prior to the time that drilling started.

Are you familiar with that? Is my understanding correct?

Mr. CANFIELD. It is correct, but it was not the most happy situation for the people that reside on that coast of Scotland. A parallel to the concern of the people on the northeast coast of Scotland precisely with the people here about offshore development.

They are concerned about the impact, not so much on the environment, but on the nature of the total social system in which the people live. As a matter of fact, I believe Pamela Baldwin, now on your staff, spent the summer with her husband studying that issue and they will issue a report on it.

Senator TUNNEY. That is correct. Mr. Canfield, I appreciate very much your testimony and the expression that you have made here today regarding the need for a total understanding of what we are doing before we go ahead and develop a leasing program in our Outer Continental Shelf and that we look at all of the various factors that impact upon that final decision.

It is good to know that there is someone with your expertise working for the GAO to make sure that at the congressional level we have a better understanding of what is going on so we can make policy decisions, hopefully, to change the present course of action, or at least the historical course of action in which the entire thrust was to develop, develop, develop, and get greater and greater supplies despite the impact upon the environment and the social systems, the societal imperatives that exist onshore and which could have lasting impact upon future generations of our people.

I want to thank you. By the way, could you make yourself available to the committee to consult further on these matters?

Mr. CANFIELD. Yes. I would be happy to do it at your pleasure.

Senator TUNNEY. Thank you very much.

Mr. Gladish, executive director of the California Lands Commission.

STATEMENT OF EDWARD GLADISH, CALIFORNIA LANDS COMMISSION

Mr. GLADISH. Thank you, Mr. Chairman. I'm Ed Gladish, executive officer with the California State and Land Commission. I would like to present in summary form a statement on behalf of State Controller Houston Flournoy.

Senator TUNNEY. Do you have a prepared statement?

Mr. GLADISH. I will be brief in summarizing his statement. I will cover the commission role and a little bit on the California offshore

program, some concerns we are addressing in regard to problems with the Federal Government and some specific concerns about Santa Monica Bay and other sensitive areas.

I'm now summarizing Mr. Flournoy's statement.

The State lands commission has no objection to oil drilling per se. We do, however, care about how and where it is done. The State supports the Federal program to achieve energy independence within our own Nation. However, we feel that safety and environmental values need not be sacrificed to achieve that independence. We feel the citizens of California can have both.

The State lands commission, of which I am chairman, is composed of the State controller, elected by the people, the Lieutenant Governor, elected by the people, and the State director of finance, appointed by a Governor, who is also elected by the people. In 1938, the State legislature established this commission and assigned to it the jurisdiction and management responsibility for California's State-owned lands and the minerals thereon, or under, including the tide and submerged lands along our 1,200-mile coastline.

These lands produce crude oil which have provided about $1 billion in nontax revenue to the people of this State. In the 1973–74 fiscal year, that revenue amounted to about $120 million. Under State law, tidelands oil revenue is assigned to California water projects, to recreation and fish and wildlife enhancement, and to capital outlay for higher education. In short, the California Legislature has established the intent to use revenue from one public resource to enhance and develop other statewide public uses and benefits.

State legislation enacted in 1955 greatly stimulated offshore exploration, leasing, and development on California tide and submerged lands. These statutes enabled expanded offshore oil development and expressed the philosophy that oil and gas could be developed in California in a manner that would be compatible with other uses of coastal and near-shore areas. It also established a number of sanctuary areas, within which leasing is prohibited.

In 1965 and 1966, the U.S. Supreme Court handed down decisions which granted to the Federal Government the right to regulate and supervise all oil drilling beyond the 3-mile limit. Until that time, State laws and regulations, developed over years of offshore drilling experience, and the awareness of local coastal conditions and attitudes, had maintained jurisdiction over Federal oil drilling offshore our State. Nearly 1,400 offshore holes were drilled under State jurisdiction and regulation prior to 1969 without the occurrence of a single significant oilspill.

Between 1966 and 1969, the Federal Government insisted on proceeding unilaterally in offshore oil drilling, and did not avail itself of existing State capability and experience in offshore California. Neither did the Federal Government revise its own regulations and practices to fit California conditions. Mistakes in judgment, improper practices, and lack of mechanical backup precautions contributed to the drilling accident in Federal OCS waters which became the disastrous Santa Barbara oilspill in 1969. That spill was avoidable. Under existing State regulations and regulatory practices, it would not have happened. But the Federal Government, in 1969, was, by court decision, not bound to abide by State regulations.

In the vicinity of proposed leases. That legislation was also supplemented by the adoption of specific regulations and lease provisions further assuring compatibility between offshore oil and gas operations and the social and environmental values of the people of California.

Considering the circumstances, the moratoriums established by State and Federal Governments after the 1969 spill were justified. To many citizens, the Santa Barbara spill confirmed the widely expressed worst fears of the environmental preservationists. Given a mutually exclusive choice between offshore oil and a despoiled coastline on the one hand, or no offshore oil and continued enjoyment of coastal amenities on the other, a large segment of the population will choose to do without the oil. We believe that this choice does not have to be made, that offshore petroleum development and other marine and coastal values can be compatible, and that this compatibility was generally demonstrated under State of California jurisdiction prior to 1969.

Because a number of areas of concern exist, the State of California is not prepared to give a blanket endorsement to the full-scale resumption of oil and gas leasing in the Federal OCS off California.

The State's present concerns relative to the resumption of OCS leasing and drilling must be met beforehand through active State-Federal cooperation and coordination.

We have taken an aggressive position with the Department of the Interior and the Bureau of Land Management in a program of coordination with respect to Federal studies and plans for development of the Outer Continental Shelf in Federal waters off the coast of southern California.

We have set up committees and named joint contact officials in the following areas of concern: The preparation of environmental impact statements; the terms and conditions of the Federal leases; the procedures and regulations by which those lessees will be bound, and will be inspected; the position, size, and direction of shoreward pipelines; and the resolution of State and Federal differences on location of offshore boundaries and ownership around several of the offshore islands.

We are talking to one another and the Federal Government is listening to what California has to say with respect to offshore drilling operations. We have hopes that these conversations can develop into operational programs designed to produce the most effective results for all people.

Problem areas must be jointly addressed by both State and Federal officials before Federal OCS leasing takes place off the southern California coast.

Federal development programs might well result in drainage of State lands now in sanctuary. It is critical that the Federal Government observe California law with respect to certain environmentally sensitive offshore areas and provide proper buffer zones. The feasibility of unitization or compensatory agreements should be explored. To this end, an exchange of data, both environmental and geological, should take place.

The possibility of unitization in productive, or potentially productive, State and Federal leases should be explored. Needless produc-

tion facilities along lease boundaries might be avoided by this mechanism.

Particular emphasis should be placed on protection of esthetic values offshore the Santa Monica Bay and the communities from Newport Beach to San Diego.

Santa Monica Bay enjoys a unique place in California history. This was outlined by the California Supreme Court in 1939 and during litigation with the Federal Government over ownership of the submerged lands. Santa Monica Bay is a magnificent recreational area with wide sandy beaches and unequaled opportunity and facilities for bathing, fishing, and sailing. It serves as the seashore for literally millions of southern Californians, as well as hundreds of thousands of visitors from all over the Nation.

State legislation recognizes the fact that Californians do not want oil-drilling operations or drilling platforms in Santa Monica Bay. The thought of such facilities and operations is most disturbing to our citizens. Therefore, and at this time, we feel the Federal Government's buffer zone, as proposed, is inadequate.

From the Santa Ana River to the Mexican border, our legislature has prohibited oil and gas leasing. In event of drainage from this sanctuary, the California Public Resource Code permits leasing only to offset drainage, and then only from upland sites. Legislative intent was to protect this coastal recreational area as now enjoyed by millions of people. Drainage buffer zones on the Federal tracts must fully protect this State sanctuary. I strongly urge restrictions on Federal leasing in this area, as well as in sight of Santa Monica Bay.

Any pipelines serving Federal OCS facilities must be routed across lands either owned by the State, or granted in trust to local governmental entities, a great deal of effort has been expended in drafting design specifications for submerged pipelines. The State would not permit any lines to cross State-owned lands that did not meet those specifications.

The haphazard use of the ocean bottoms for pipelines in the gulf coast area is well known. Such disorderly use would not be permitted in California. It will be necessary, therefore, to expand effort in the planning stage to properly provide for environmentally acceptable pipeline "corridors."

In 1965, the U.S. Supreme Court rendered an opinion establishing guidelines for the ownership boundary dividing State and Federal ownership in the California offshore zone. Certain issues, however, were not resolved and are subject to resolution under retained jurisdiction of the court. These issues have been hanging fire for a long time. We feel they should be resolved before any Federal OCS leases are issued in waters off the southern California coast. The State lands commission is willing to negotiate.

OCS Order No. 2 indicates that Federal drilling procedures and regulations are being brought into substantial conformance with those of the State. A mechanism to assure that this continues, and that there is close liaison and coordination between State and Federal regulatory agencies must be established, maintained, and actively utilized.

The State can provide valuable assistance in the preparation of southern California Outer Continental Shelf lease sale environmental impact statements, with emphasis on appreciation of State concerns,

and checks on the accuracy of data used for analysis. The State is particularly concerned with the primary and secondary effects of OCS operations upon the shoreline and coastal areas.

An ad hoc advisory committee of affected State agencies has been established to assure appropriate input and access to information, and to facilitate State review of the final product.

Another issue which should be promptly addressed by the Federal Government and all coastal States is the present inequitable system of sharing revenues from OCS leases. Coastal States should be more adequately compensated for the impact of offshore mineral extraction operations. Congress should adopt, as soon as possible, pending legislation establishing revenue sharing from OCS development. Such legislation should require that the funds so allocated be used for coastal purposes.

In summary, we believe that there is a way to develop the OCS and protect our environmental values. We must weigh heavily the environmental impact study process required by Federal and State law to bring forward the implications of proposed decisions.

We are confident that full utilization of this process can result in consideration of all concerns. The final selection or nonselection of specific tracts must be based on full and total communications between the Federal Government and the State, counties, cities, and all others concerned and affected.

I believe this environmental impact statement process will ultimately prove, for example, the undesirability of platforms in sight of Santa Monica Bay. This process may, on the other hand, prove that other southern California OCS areas can be developed in an acceptable manner.

Senator TUNNEY. Thank you very much. I was wondering, is it the position of the Commission that no development on the Outer Continental Shelf should take place from the Santa Ana River to the Mexican border?

Mr. GLADISH. No. It is the position of the State lands commission that any development off of any sanctuary should protect the integrity of that sanctuary in terms of esthetics and physical loss of oil that may underlay the State side of that sanctuary.

Senator TUNNEY. How can that be preserved if you allow development 3 miles out? Assuming there is a sanctuary down the Santa Ana River to the Mexican border, how can you preserve the sanctuary if you allow oil development in the Outer Continental Shelf.

Mr. GLADISH. There may be openings that could be utilized. One thing in the context of that statement, if there was a submerged system used that would not impinge on the esthetic considerations of that sanctuary, if such a system were used, it must be used far enough away from the boundary so that State oil is not drained from that sanctuary. Or another example would be if such a development was far enough offshore so that there was no visible impact of that development onshore, it would have no impact on the sanctuary there.

Senator TUNNEY. Is it the position of the commission that there should be no drilling in the Outer Continental Shelf off California until the approval by the State legislature of the coastal commission plan?

Mr. GLADISH. I would interpret the policy of the State lands commission that they would not support any program that was in conflict with the California coastal plan.

Senator TUNNEY. In other words, the coastal plan has to be completed, concluded, and accepted before the commission would accept from its point of view the development of the Outer Continental Shelf?

Mr. GLADISH. It might be possible—let me give an illustration. You discussed this morning with the Solicitor from the Interior Department to some degree, and his assistant, the matter of development of the Santa Barbara Channel. It is my feeling that there is a proposal now before the county planning commission in regard to onshore processing facilities for oil from that lease, once the platform is placed there. Assuming the county approved onshore site for processing that oil, then the pipeline that would service that facility from the platform to shore and back to some facilities would have to cross jurisdictions of the California Coastal Commission and the State lands commission.

If it were the position at that point of the California Coastal Commission to approve that pipeline, then it would not be the position of the State lands commission that they would not approve it until the plan was finished.

Senator TUNNEY. The coastal commission would have to approve it?

Mr. GLADISH. Yes.

Senator TUNNEY. Then, if they didn't approve it, your position would be there shouldn't be any Outer Continental Shelf leasing until the coastal plan is completed, accepted by the legislature, and adequate opportunity had to consult with the State, local, and coastal commission representatives.

Mr. GLADISH. That is difficult for me to forecast in that finite of an expression or within those parameters because the planning process is going on for the coastal commission which we are heavily involved in. They have schedules. We cannot forecast what our legislature might do in response to that plan.

Senator TUNNEY. I understand.

Mr. GLADISH. I don't see that they can make a total commitment in that regard.

Senator TUNNEY. I want to make sure that I understand what the State lands commission's viewpoint is. This is a hearing record which is going to be made available to the Congress as a whole. We will be using this hearing record, at least I will be, in my consultations with the other Members of the Senate and with the Department of the Interior, the FEA, and the Department of Commerce. I want to make sure I understand what the land commission's viewpoint is. Assuming the coastal commission does not approve pipelines coming in from the Outer Continental Shelf, is it then the position of the State lands commission that there should be no development of the Outer Continental Shelf in that particular locality where there has been a disapproval, until such time as the coastal commission study and plan is completed and has been accepted by the legislature, and after there has been consultation with State and local officials and the coastal commission by the Department of the Interior?

Mr. GLADISH. Let me respond in this context. The Federal Government has indicated this morning they were studying areas off the southern Califorina coast. They may as a result of these studies—they have several options. One would be to propose to move ahead in some form with all of them or propose to move ahead with a portion of them or they may reject all of these proposals based on the results of their environmental studies and other things.

Without the benefit of that kind of information and without the benefit of the energy element and other related elements of the coastal plan, it would be impossible for the commission to make a hard commitment inthat regard.

We don't know necessarily that they are going to be inconsistent.

Senator TUNNEY. We have heard from quite a few local officials and they are able to make a hard commitment and the hard commitment is they don't want the Outer Continental Shelf leased until the coastal plan has been concluded and until there has been acceptance by the legislature and until such time as there has been consultation with the Department of Interior based upon that plan.

So, in other words, you are saying that the commission position in this area is different from the position of the local officials that testified?

Mr. GLADISH. In that context, I would say, yes.

Senator TUNNEY. You in the lands commission are willing to accept the development of the Outer Continental Shelf despite the fact the plan is not completed, given certain factors which only one's imagination can postulate.

Mr. GLADISH. We have, it seems to me, the obligation to follow the guide of NEPA in terms of jumping to a conclusion without having all the facts. It seems that process is supposed to bring forward the facts. There are two plans, programs going on, one by the Federal Government and one by the coastal commission.

Neither of these programs has come to a solid point of conclusion into what their design is in terms of leasing or restrictions regarding the coastline.

Senator TUNNEY. I point out to you that the coastal plan is a new environmental strategy that goes beyond NEPA and so by satisfying NEPA, you haven't necessarily satisfied the coastal plan nor have you satisfied—at least in my view—what the Congress intended when it passed the Coastal Zone Management Act of 1972, which assumes you will have these State coastal zone commissions and assumes you are going to have State plans, and assumes you are going to have consultation with State and local officials by the Department of Interior, based on the plan.

I want to thank you very much for being here and giving your statement or Houston Flournoy's statement, as chairman of the State lands commission. I don't have any more questions.

Mr. GLADISH. Thank you, sir.

Senator TUNNEY. We are going to have one last witness before the luncheon break. Lois Sidenberg will be testifying. Then we will have a break for lunch and we will reconvene after lunch and hear from Mary Ann Eriksen, Janet Adams, Shirley Solomon, Faye Hove and from any other citizens who want to testify. We will reconvene at 2 o'clock.

STATEMENT OF LOIS S. SIDENBERG, CHAIRMAN OF THE BOARD, GET OIL OUT, INC.

Mrs. SIDENBERG. Thank you, Mr. Chairman. I appreciate the opportunity of being able to give you some of our ideas. You have a prepared statement that I have submitted for Get Oil Out, GOO.

Senator TUNNEY. That statement will be included in the record. I would appreciate it if you could either summarize it or perhaps, if you so desire, incorporate it in the record and then speak extemporaneously about what you would like to highlight.

Mrs. SIDENBERG. What I have done is eliminate some of the paragraphs in the submitted statement and having sat here all day yesterday and today, I have added some written remarks that I would like to present now.

Senator TUNNEY. Fine.

Mrs. SIDENBERG. Most of what was said yesterday and so far today has been like living a nightmare, a repetition of what Santa Barbara area officials and citizens were saying in 1967 and 1968, prior to leasing in the channel.

Yet, in spite of expert opinion that the seabed was geologically unstable, subject to severe seismic disturbances and the area was environmentally sensitive, the leasing took place. The Secretary of the Interior subsequently called this his "Environmental Bay of Pigs." But there is little comfort in this to the Santa Barbara area where 5.5 years after the disastrous blowout, oil is still leaking into the channel daily.

We look at five unsightly platforms in the OCS and six more in the sidelines. And the failure of one of the safety devices resulted in 50 square mile slicks and reblackening of our beaches.

Mr. Gladish failed to mention when he said there had never been an accident in State waters that 4 years ago there was a fire on a platform off of Carpinteria and 3 years ago one off of Summerland.

That was extremely dramatic. The other problems we have as far as operation in State waters is supply water for the particular operation. This could certainly affect any operation in the OCS as water must be supplied from the mainland. Fifty-three years ago in 1920, the then Director of USGS was saying what we are saying today about the use of oil. It is irreplaceable. There is a necessity of conservation and finding practical substitutes or other adequate sources. We are still speaking of the energy crisis, the rapid depletion of petroleum sources, while at the same time, we continue to deplete them for uses which contribute to the increasing degradation of our environment. Together with those concerned about this issue 53 years ago, we should now consider whether the solution lies not in making more oil available, but in adoption of programs to arrest its profligate use, and in preparing for use other available sources of energy.

We are not saying that all oil development should cease, or that new efforts should not be initiated. What we are saying is, it is imperative that the Department of the Interior makes proper, objective, and unbiased evaluation of the areas where such operations are contemplated, not succumbing to the pressures of the moment by actions which could eventuate in irreparable environmental and concurrent economic damages to an area, far exceeding any benefits which might be accrued.

We are told that regulations have become more stringent since the 1969 blowout. However, during the past few years, there is documented evidence that in the Santa Barbara Channel operations alone, inspection has been cursory, inspectors are not entirely qualified, drillers are inadequately trained and 76 instances of regulation violations were listed by the GAO in 1 year.

Adding to the pollution from oil still leaking daily into the channel from the original blowout are drilling cuttings, wastes, acids and detergents. Sailors and commercial fishermen complain of encountering unmarked debris and obstructions, left from drilling operations, floating on or immediately below the surface of the channel.

The Santa Barbara Channel is an example of the results of ill-advised leasing and development. Admitted that the channel poses unusual geological problems which may not exist in other OCS areas, but similar damages could be expected to the environmental assets of other coastal communities if leasing and development is permitted.

The USGS has stated that industry accidents are expected to occur at historical rates with any increase being in direct relation to the increase in operations.

In other offshore areas, during the past 2 years, the list of operational accidents due either to nonuse or malfunction of safety devices is too long to list here. However, if it is so desired, I have a number of those accidents listed with me and will be happy to present them if questioned.

As to the efficacy of blowout and other operational safety devices, people forget that 11 months after the channel blowout the failure of a safety device to function on platform A, when the pressure in the well dropped, resulted in a 50-square-mile slick covering the channel and again blackening the beaches. It was 12 hours before the well was shut down and repairs started.

In addition to the damaging effects of a blowout or spill on the beaches and seas of the coastal communities, one must also seriously consider the visually downgrading effect unsightly platforms have on the environmental assets of coastal communities. Platforms 5½ miles offshore are visible about 80 percent of all daylight hours during the year.

The Channel Islands are some 22 miles from the Santa Barbara County mainland and are distinctly visible except on foggy days. Therefore, any platform off the coast of southern California would have to be at a distance of some 20 miles to avoid visibility from shorefronts, including residential areas.

Offshore operations require onshore facilities—I think you have discussed that but I think it is important as far as the economy in the area is concerned.

It must be noted that there is a great deal of difference between southern California offishore operations and those in the OCS off certain sections of the Atlantic seaboard. The climate in southern California makes the recreational uses of beach and sea year-round activities upon which the economy of coastal communities depend.

However, along the Atlantic seaboard, from Maine to the Carolinas, there are only 3 to 4 months of the year when beaches and sea are used for recreational purposes. This must be a consideration when determining where OCS operations are to take place.

Yesterday, Senator Stevens complained there was opposition in areas where such development was proposed. There are good reasons and the reasons are because in the past there has not been adequate consideration given to the irreparable environmental damage experiences in many areas.

The oil companies have stated recently that the OCS along the southern California coastline ranks only fourth on the list of desirable locations, citing unperfected technology and danger from frequent severe seismic disturbances. There are numerous examples of offshore platform operation accidents during the past few years which show that operations are far from perfected to date.

We have followed closely the development and testing of containment and recovery systems for oil spills and can state that none have proved effective in anything but the most favorable weather and sea conditions—and only for containing and recovering small amount of spill. As an example of inadequacy, containment and recovery of oil from a tanker collision in San Francisco Bay some 8 months ago had to be called off because of high seas.

One of the conditions established by the State Lands Commission for lifting the moratorium on new drilling from existing structures in the tidelands was based on demonstration that containment and recovery systems for oil spills had been perfected and were readily available.

In fact, there has been no evidence that such systems have proved effective in weather and sea conditions prevailing along our coastline. We, therefore, consider the State's action irresponsible.

Prior to any consideration of leasing in the OCS off the southern California coastal area there are a number of questions which need to be answered:

1. Does Project Independence make sense? If so, why has a large percentage of Alaskan oil already been contracted for to Japan?

2. Is there actually a need at this time for developing the California OCS? With Alaskan oil coming to the west coast, won't there be a surplus of oil in California? Isn't there a surplus now? What reliable figures are available on this? It must be noted that Alaskan oil can only be shipped to the west coast.

3. If gas and oil are needed on the west coast, why not increase production of present onshore wells, and the development of the Elk Hills Naval Reserve in Kern County, before buying a pig-in-a-poke by opening up the California OCS?

4. Are there adequate west coast refining and separating facilities presently available for processing the additional oil and gas which would be produced from California OCS developments?

One cannot help having the recurring sense of futility in what we are doing today. I believe it is imperative to have protective legislation enacted.

Senators Tunney and Cranston have entered a bill. This bill would guard against oil development at this time. There should be a concerted effort throughout the State to gain the support of enough Members of Congress to have the bills enacted at the opening session of the next Congress.

I see this as the only possible chance of preserving the integrity of the coastal areas and islands. Stewart Udall called leasing in the Santa

Barbara Channel his environmental Bay of Pigs. Let's have no repetition of this mistake along the rest of the southern California coast.

Senator TUNNEY. Thank you very much, Mrs. Sidenberg. I have had the opportunity on numerous occasions to discuss these matters with you privately and I have heard you testify on these matters before the relevant congressional committees. I want to congratulate you for the interest you have shown and the thoughts you have developed as a result of these problems.

I think it has been of great help to me personally, and to other Members of Congress, in obtaining a better understanding of what the development of the Outer Continental Shelf means insofar as the total impact upon our society and our environment are concerned, not only in California but throughout the country. I must point out one thing. In 1967 and 1968 which you referred to in your prepared remarks, we did not have a Coastal Zone Management Act then. We did not have the Ocean Policy Study and we did not have the attention of the Congress and the Nation and I think that this is very important, a very important difference.

I think Mr. Canfield's statement was so illuminating in this regard and particularly as it related to timing.

He pointed out that it would be a good number of years before there could be full production in the Outer Continental Shelf, assuming you went ahead now with the decision to exploit it to its maximum potential.

It does appear to me to be clear that it would be a great, great mistake at the very minimum for the Department of the Interior to go ahead with a leasing schedule prior to the time that the California Coastal Commission had had its plan prepared, finalized and approved by the Secretary of Commerce.

So, I would just like to say I am appreciative of the effort you have made to come down from Santa Barbara to be with us today.

Mrs. SIDENBERG. Thank you. Would it be your understanding that if the proposals that you have made as far as the adoption of the plan for the coastal area were concerned that there might be some reason then for the development of Exxon leases also in the Outer Continental Shelf in the Santa Barbara Channel that this could be used as an argument even though they have been approved by the Interior Department—that it might be an argument to delay the actual carrying out or initiating of that development?

Senator TUNNEY. I do think so, yes. Certainly that is on the Outer Continental Shelf. Thank you very much. We are going to adjourn until 2 o'clock when we will take up the rest of the witnesses who appear on the witness list and any other statements that anyone desires to make from the public who are here and would like to be heard and have their statements included.

It certainly appears that before any tracts are put up for lease bids in the southern California OCS, these questions should be satisfactorily and factually answered by information acquired not only from the oil companies, but from independent experts. This information must be included in any Federal energy policy, and such a policy must be developed and approved prior to any future discussion of leasing in the California OCS. The Department of Interior is now soliciting participation by such organizations as ours in drafting an EIS for

the proposed southern California offshore oil and gas leasing program. The working outline to be followed covers an extensive amount of information needed and should permit an adequate amount of time to make this EIS of any value.

Mrs. SIDENBERG. Former Secretary of Interior Stewart Udall has called leasing in the Santa Barbara Channel his "Environmental Bay of Pigs." Let's have no repetition of this mistake along the rest of the southern California OCS.

As Mr. Canfield stated, it appears before tracts are put up on lease in southern California OCS, the questions should be answered by information acquired not only from the oil companies, but from the independent experts. This information must be included in any Federal energy policy and such a policy must be developed and approved prior to future discussions of leasing in the California OCS.

This ends my prepared statement. I wonder if this isn't merely an exercise in futility. Everything said yesterday was said in 1967 and 1968 when we were trying to stop channel leasing. EIS's are now required but even if the EIS details onshore and offshore development in the most damaging circumstances, the Department of the Interior and /or the State lands commission approves them.

Examples are the massive Exxon channel development under the Santa Barbara Channel and onshore facilities and expanded Arco development onshore and offshore in the tidelands which we do not seem able to stop. These engender more traffic and greater hazards to navigation than just the platforms and the servicing vessels.

I think that everyone should be warned that once—it is not a question as to EIS for development because once the leasing has taken place, there is no chance of doing anything else about it. The oil companies have paid for leases and even though the EIS may prove damaging there is no way of stopping some sort of development.

Assemblyman Sieroty pointed out there was too much power vested in too few departments and agencies to respond to the voice of the agency. I add this is because for too long the oil companies have been calling the shots. Departments and agencies have responded, aided and abetted by oil-oriented Members of Congress and the executive. I have been to numerous hearings over the past 5 years where only one or two Senators or Representatives were present.

Senator TUNNEY. Any statements of the public will necessarily be limited to 5 minutes but I am prepared to sit and listen to members of the public who care to express themselves after we have completed our witness list. We will adjourn until 2 o'clock.

AFTERNOON SESSION

Senator TUNNEY. The hearings will come to order.

Our first witness is Mary Ann Eriksen representing the Sierra Club.

STATEMENT OF MARY ANN ERIKSEN, SOUTHERN CALIFORNIA REPRESENTATIVE, SIERRA CLUB

Ms. ERIKSEN. Thank you, Mr. Chairman. As I am sure you know, the Sierra Club has, since 1892, been involved in conservation of natu-

ral resources, which include coal and oil, as well as forests and parks and other natural resources.

We welcome you home to California today to tell you how much we appreciate your taking the time to come here and listen to the people.

Senator TUNNEY. Thank you.

Ms. ERIKSEN. We are especially grateful because no Project Independence hearings were held in Los Angeles, even though over 10 million people live in this area, and we are faced with the massive offshore drilling program.

I must add, while every effort seems to have been made on the part of FEA to make the Project Independence hearings convenient for the oil industry, like scheduling the one on regulatory policy in Houston, southern California conservationists had to travel to Atlanta to testify on OCS development.

The other reason we are glad for the opportunity is because Under Secretary of the Interior Jared Carter came to California during the summer and said that if the people of southern California said no, there would be no leasing. However, our energy chief, Mr. Sawhill, has since come to southern California. He said there wasn't time to hold hearings here, but he himself came and said, yes, there is oil and gas in California, and it will be developed.

Now that I read in the paper the Interior Department says there may be a delay. It insinuates the decision has been made prior to the filing of the impact statement that leasing will proceed in the future sometime.

Mr. Sawhill said it is unfair for the people of Colorado and New Mexico to sacrifice their environment for California. He implies it's okay for us in southern California to sacrifice our resources to satiate the Nation's thirst for oil.

I want to go to the primary issues. I want to cite an article in Wednesday's L. A. Times.

> Nation's Petroleum Crisis Over, Energy Chief Sawhill Maintains.
> FEA's projections indicate that the supply picture today is remarkably different from that of last November, Sawhill said. We must estimate that, provided we are able to import crude oil at current levels of 3.5 million barrels per day, the supply of most petroleum products will be adequate through the second quarter of 1975, and should continue to improve thereafter.

Then let me mention that during the summer, newspapers reported that oil companies in the southland, while publicly playing the role of the great conservationists, were privately putting heavy pressure on their dealers to pump more and more gasoline.

But that story only underlines a basic fact: Conservation works against excessive oil company profits. It also has convinced many southern Californians that there are alternatives to massive and speedy offshore leasing.

Another press report quoted an oil company executive who said the supply picture had changed so drastically that he now believed there would be an excess of oil on the west coast, which would necessitate the building of an oil pipeline from California to the Midwest.

Still further rumors abound that our oil is really headed for Japan, presumably to ease our balance of payments. We've heard that argument before, of course. That was one of those great justifications for building the SST.

And speaking of that defunct environmental monster, we urgently ask of you to strongly protest the invitation extended to the SST's English-French cousin, the Concorde, to land in Los Angeles on October 16.

Further, we ask you to request that the mayor's invitation be rescinded, especially on the grounds that the Concorde is the perfect but repugnant, example of the most inefficient and wasteful use of oil.

But let me proceed from this diversion to what I think is the central issue and in so doing, let me quote from the Ford Energy Policy Study, noting it's the Ford Foundation, not President Ford's.

The pace at which the Federal lands are opened can play a key role in determining the overall rate of energy growth, the mix of fuels, and the degree to which the nation must rely on imports. A policy of massive leasing of these resources—which is what the Government is now advocating both through administrative proclamation and through Senator Jackson's Energy Supply Act of 1974, although we praise you, Senator Tunney, for your amendments to that bill—would signal a future based on high rates of energy consumption. On the other hand, decisions to limit development of one or more of these resources, coupled with policies of energy conservation, could lead the Nation toward lower energy growth.

It is imperative, therefore, that the Federal Government make energy conservation a No. 1 priority in action, not just in speeches and one way to begin is to adopt a go-slow approach on offshore leasing.

And I would like to add with great emphasis that the less energy the United States consumes, the fewer the international problems we face. Promoting self-sufficiency through conservation would also encourage a more equitable distribution of the Earth's resources, since the United States presently represents 6 percent of the world population but consumes a third of the world's energy.

You, of course, Senator Tunney, have written on conservation programs, and while I realize that conservation is not the issue under discussion today, I do think it important to make a point or two about conservation as the most ecologically and economically sane way to generate enormous supplies of energy. The automobile is a fine example.

Again let me quote from the Ford energy policy study:

In 1958, the average American car got over 14 miles to the gallon; by 1973 the rate had dropped to less than 12.

The main reason has been the increase in auto weight. Fuel consumption and auto weight are directly related: A 5,000-pound car uses twice as much gasoline as a 2,500-pound car. Each model car has crept upward in weight over the years; 1974 intermediate size car, for example, weighs about the same as 1972 full sized models.

To require, then, that automobiles average 24 miles to the gallon rather than 12 could cut the automotive consumption of gasoline in half.

Here, I think we need to point out too, even if we go ahead with offshore leasing today, it's going to take time before that program goes into full effect.

The same is true with this kind of conservation measure. We will not magically wave a wand and have the cars getting 24 miles to the gallon.

The start has to be made immediately and seriously.

Carpooling could make another considerable dent, and both these savings could be realized without curtailing the number of miles driven.

To go on:

> Automobiles consumed an average 8,100 Btu's per passenger miles in urban travel in 1970 while urban mass transit consumed less than half that amount. . . . Automobiles also carry about 85 percent of all intercity passenger traffic, while railroads and buses—the most energy-efficient modes—carry only 3 percent of the traffic. Airplanes consume even more energy per passenger mile than automobiles.

The conclusion from those statistics I believe is crystal clear about what kinds of programs government must encourage, plan, implement, and subsidize.

As far as the economics of conservation are concerned, the advice of a White House energy aide seems to have been forgotten: "You don't need a lot of money for conservation. The technology is on the shelf and the incentive is there."

But as another energy official has responded in disgust, "If you look at the way decisions are made on energy, we are willing to pay much more to create a barrel of oil than we are to save it."

Even the Office of Emergency Preparedness, before it was criticized and disbanded by Mr. Nixon, reported in 1972, according to the Los Angeles Times of February 24, 1974, that no less than 7.3 million barrels of oil a day—43 percent of current consumption and two-thirds of projected oil imports—could be lopped off the Nation's fuel use by 1980. Moreover, this could be done . . . almost without pain to the industry or the average consumer. . . . Beyond 1980, continuing efforts to improve fuel efficiency if begun now could almost flatten the overall energy consumption trend between now and the 1990's, holding the increase to 1 percent a year, according to the report. Unconstrained, the country's fuel appetite is expected to rise over 75 percent the next 20 years.

For the main reason, then, of redirecting Federal energy policy toward conservation rather than exploitation, restriction of offshore leasing seems necessary and prudent, especially when the need for this oil no longer appears urgent. But there are many other reasons to advocate, at minimum, a moratorium on development of the OCS development in southern California.

Most important, the work of the State coastal commission, as mandated by the majority of the voters in this state, has not been completed, and it is imperative that no leasing occur until this work is finished.

Second, by summer's end the Bureau of Land Management had not even awarded contracts for the gathering of baseline data; and for biological data in particular to be meaningful, it must be collected at least over the course of a full season for minimal information.

Third, there seems to be little evidence that the technology of oil spill recovery is adequate.

In regard to spills, the Federal Government has acknowledged that there will be major spills from OCS development as well as many, many, minor spills and leaks.

Although public concern has focused largely on the major spill with its dramatic effect, biologists are beginning to discover that

the problems caused by oil on the sea are not limited to the immediate kill of birds, immediate toxicity to shallow-water marine life, the smothering of intertidal animals, the tainting of shellfish.

Work at Woods Hole Oceanographic Institute has demonstrated that even 8 months after a spill near the shore in Massachusetts, oil constituents were still present in sediments, both inshore and offshore, and in marine organisms, including the commercially important clams. There was an initial massive kill of fish, shellfish, worms, crabs, and other invertebrates.

Trawls in 10 feet of water showed a 95 percent mortality. Repopulation had not occurred in 9 months. In fact the contamination spread beyond the area originally affected. The kill of shallow-water plants and animals reduced the stability of the marshland and sea bottom, and the increased erosion may be responsible for the spread of the pollution along the sea bottom.

In short, then, oil pollution may be much more serious than previously thought and poses a substantial threat to the food web upon which we are very dependent.

Aside from this kind of environmental impact, what social, economic, and environmental effects will offshore development have onshore?

One attempted trade off already revealed will be to surrender the proposed Channel Islands National Park to the oil industry for supply bases, crude oil processing, communication and transportation bases, and field headquarters.

Another significant impact onshore may be deleterious effects on the recreational resources of an area greatly dependent on its beaches—both as a relief valve for a dense and polluted urban center, which is drastically lacking in significant parkland and open space, and as an asset upon which an important tourist industry is based.

I might say at a previous hearing the Mexican-American community joined us in talking about the offshore development, saying they felt that this kind of development was a serious threat to the recreational resources for their community as well.

So far BLM has remained mum on environmental impact, but when this agency does report, how comprehensive an assessment can we expect, considering the lack of adequate time for a thorough investigation of impacts, offshore and onshore, measured in social, economic, and environmental costs. [We must also note that much of the information for the environmental impact statements will come from the oil industry.]

Finally, shouldn't the people who live in California have a major voice in deciding if the final price of OCS development off our coast is too high a one to pay?

We think so.

In summary, it seems that as California goes on this offshore leasing program, so goes the Nation in its policy on energy and conservation in the future. We can either go ahead with an acceleration of business as usual and the environment be damned. Or we can demand a national energy program based on energy conservation and on a thorough investigation and judgment of the impacts of all possible alternatives, which in the long run will benefit all the peoples of the world.

We should have named Project Independence, "Interdependence."

Senator TUNNEY. Thank you very much. Yours was an interesting statement. I agree with you that it is tragic that we have not looked at the problem of offshore oil development from the point of view of all the interrelated factors that impact upon a decision to go ahead and the resulting effect on the quality of life in southern California, assuming that the decision is made to go ahead.

Although I think if a decision is made to go ahead, it may mean certain people, in the sense they will have oil to burn, it can't help but have adverse impact on those of us who live in the southern California area.

It would be much better if there were no development whatsoever. I would like to get to some specifics though with you. One of the things that you mentioned about the oil spill—Wood Hole Oceanographic Institute studied off Massachusetts. Even 8 months after the spill occurred, there was substantial impact upon the ecology of the area.

I was wondering if you had any information with respect to the impact of the Santa Barbara spill? A number of scientists here in California say there was no harm caused by the Santa Barbara blowout. Do you have evidence on the matter?

Ms. ERIKSEN. The difference in the studies on the west coast and the east coast is that new tools are being used in the investigation.

Ignorance is bliss. If you can't see or investigate or somehow find adverse effects, then you can't report them. At the Woods Hole study, I understand it was chromotography which was the deciding factor which made the difference in the total assessment.

In other words, the scientists doing that study had additional tools in their hands to allow an assessment that wasn't done after the Santa Barbara blowout.

Senator TUNNEY. The staff just mentioned to me that apparently the oil industry has pilloried the scientists that did the Woods Hole study. I wonder if there has been any independent checking aside from the Woods Hole study which has ratified conclusions which were made by the Woods Hole study?

Ms. ERIKSEN. I do not know off the top of my head.

Senator TUNNEY. I would like to know precisely the position of the Sierra Club with respect to the issue that is before us and that is Outer Continental Shelf leasing. Is it your position that there never should be any drilling on the Outer Continental Shelf forever, or is it that you are seeking input to the decisional process so that your perspectives can be considered and that you would have an opportunity after the coastal commission has completed its study, to weigh all the various components that are going to go into making up a final decision.

Ms. ERIKSEN. I have appended to my statement the national policy of the Sierra Club on offshore development. We are not in total opposition to all OCS development. That would be an untenable position in today's world. On this particular program we have reserved final judgment until we see the final environmental impact statement. We think certain prerequisites should be met before the sale is effected and the policy statement goes into some detail on those prerequisites.

No. 1, of course, would be implementation of the State coastal commission work. The gathering of baseline data is essential, and I was really appalled to learn that BLM was proceeding with the sale and

had not even awarded the contracts to gather the information. I don't know if they have subsequently done that, but when I last talked to them, there was feeling it wouldn't be done until some time after the draft environmental impact statement was released.

We have reservations about the art of technology, especially with regard to oilspill recovery. They are spelled out in detail.

Senator TUNNEY. What role do you see for the Sierra Club in the decisionmaking process of the Interior Department?

Ms. ERIKSEN. We will take a careful look at the environmental impact statement.

Senator TUNNEY. Will you help in the preparation of it?

Ms. ERIKSEN. Of course, we are faced with the same problem that all citizen groups are faced with. We do not have full-time people that we can lend to BLM to work side by side with them day in and day out. We will try to assist with our limited personnel and resources. At this point, and the major point I am trying to make today, is that it is the position of the Congress and the administration toward development that makes the difference today.

In other words, if the administration continues with Nixon's policy of going ahead with massive offshore drilling, then to institute meaningful conservation and to get the public to go along with conservation will be a long, hard process. But on the other hand, if the Congress and the administration redirect policy at this point and put at least as much emphasis on conservation as on development of alternative sources, looking at all the possibilities, then I think we will be moving in a different direction. As far as Project Independence is concerned, it is sad but true that the last and most important hearing is on conservation and that will take place in San Francisco on the 10th of October. Yet, the plan for Project Independence is essentially completed and I believe has already been submitted to the President and will be submitted to the Congress on the 1st of November. There is really no way for the public to have constructive input on the 10th in San Francisco and have that incorporated into the final plan.

Senator TUNNEY. Were you here when Mr. Canfield testified how between now and 2000 there would be a saving of $150 billion if conservation were followed rather than a program of massive development of offshore resources?

I think I am quoting him accurately. I think he said it would be $250 billion capital investment to provide for the energy needs by the year 2000 assuming no conservation efforts and about $350 billion could be saved if we followed conservation methods.

Were you here when he said that?

Ms. ERIKSEN. I caught some of his remarks, yes.

Senator TUNNEY. I thought that was an interesting comment. He is an expert in the field. He worked for the Department of Interior and he worked on the Outer Continental Shelf development in the Department of Interior and indicated there could be savings of up to 40 percent if we had conservation practices followed. He said, "The cumulative capital requirements for industrial and commercial energy conservation measures between 1975 and 2000 would be about $200 to $250 billion, in 1970 dollars. To produce the equivalent energy in terms of oil, coal, natural gas, and electricity would require capital costs of about $350 billion."

So, there would be a substantial savings to the society to conserve in money terms. But, of course, in ecological terms the benefits would even be much greater. So, the point I am trying to make is that it is not just the Sierra Club that is thinking along these lines but there are many other people who have had a substantial familiarity with the Department of Interior leasing program that feel exactly the same way.

Ms. ERIKSEN. Again, the point I made, what makes good sense ecologically is making "goon" sense economically as far as the total welfare of the Nation is concerned.

Senator TUNNEY. I was interested in your statement that by summer's end the Bureau of Land Management had not awarded contracts for baseline data.

What you are suggesting here is if they were going to conduct these studies for a full season, there would be no way to award the leases in early summer of 1975 if the sites specific environmental impact statement is going to be meaningful?

Ms. ERIKSEN. They had no intention of finishing the collection before they awarded the leases. I don't think they were talking about postponing the leasing.

Senator TUNNEY. You are sure of that fact?

Ms. ERIKSEN. I believe Mr. Grant is in the room. That was the information I was given by his office during the summer.

Senator TUNNEY. For the record, I would just like to indicate that the—I am informed by staff that the Massachusetts spill was a refined diesel spill which behaves differently on the environment than a crude oilspill. Apparently, refined diesel spills are much more toxic and have much greater impact upon the seabed and the coastline and the estuarian system than would a crude oilspill, not that a crude oilspill isn't terrible.

But it is important to note there was a difference between the Woods Hole study and the Santa Barbara case.

Ms. ERIKSEN. The more investigative work biologists do, the worse the picture looks. When we say as a result of the Santa Barbara oilspill, well, it really wasn't so bad to the marine environment after all, that is probabaly more the result of ignorance and lack of thorough investigation rather than the result of conclusive proof.

Senator TUNNEY. I would agree with that. Thank you very much, Ms. Eriksen. I appreciate your taking the time to give us your views. I am fully aware of the fact that the people in the Sierra Club, for the most part, are interested citizens who have other responsibilities than just spending full time monitoring of the degradation to our environment as a result of governmental or private industrial decisions. I think that the fact that you did take the time and give such a comprehensive statement is very much appreciated.

Ms. ERIKSEN. Thank you.

Senator TUNNEY. Thank you. Our next witness was Ms. Janet Adams. She unfortunately could not be with us this afternoon but she has indicated she would submit a statement for our hearing record on behalf of the California Coastal Alliance. Our next witness is Ms. Shirley Solomon who represents the Seashore Environmental Alliance.

STATEMENT OF SHIRLEY SOLOMON, SEASHORE ENVIRONMENTAL ALLIANCE, AND NO OIL, INC.

Ms. SOLOMON. Senator Tunney, I am here today as a representative of No Oil, Inc., as well as the Seashore Environmental Alliance.

No Oil, Inc., is a nonprofit, one-purpose organization opposed to any oil drilling—inland, coastal, or offshore—in the Pacific Palisades area.

We have quite a bit of experience in fighting the oil industry the past few years.

SEA, which was born on June 6 of this year, is a coalition of organizations and individuals dedicated to the preservation of the California coastline. We are not quite 4 months old, but we already have 63 affiliates, some of which are coalitions of up to 70 organizations.

Among our affiliates are the Consumer Federation of California—Los Angeles and Orange Counties—the California Coastal Alliance, G.O.O.—Get Oil Out!—of Santa Barbara, many homeowner federations, inland as well as coastal, and other significant groups.

Many legislators on all levels are honorary members of SEA, including Congressmen Alphonzo Bell; George Brown, Jr.; Yvonne Burke; Paul McCloskey and Jerome Waldie. I won't take the time to cite the dozens of others, but I assure you we are proud of having all of them with us, and they are from both sides of the aisle in this nonpartisan fight.

SEA has just completed a highly successful petition drive in opposition to the proposed Federal offshore oil drilling. The number of signatures collected—primarily on the beaches from Santa Barbara to San Diego—during our Labor Day weekend project, totals a whopping 201,257! And additional petitions keep straggling in.

SEA believes the Outer Continental Shelf should be made a national preserve to be used for mineral exploration and extraction only in the event of a national emergency declared by the Congress. A resolution stating this—AJR 122—was passed by the State Assembly on August 28, 1974. A similar resolution has been introduced in the Los Angeles City Council.

Senator TUNNEY. When you say the Outer Continental Shelf, are you referring to the State of California?

Ms. SOLOMON. State of California, sorry.

For too many years, the petroleum industry has been the data collector, the data disseminator, and the virtual dictator of anything remotely tied in with the laws and regulations involving the industry. If ever a conflict of interest existed, this is it.

For example—and this is documented—the U.S. Geological Survey, which is supposed to protect the people, hired 23 oil executives to draft the antipollution regulations for drilling on the Outer Continental Shelf. In his column of July 24, 1974, Jack Anderson likened this to putting Dracula in charge of the blood bank.

For example—the Western Oil & Gas Association has spent several hundreds of thousands of dollars on their own environmental impact statement on the proposed offshore drilling on the California coastline. This material will be utilized in the official draft of the EIS.

This morning, Mr. Lindgren, who testified, brought up the Seashore Environmental Alliance had been asked to have the technical experts work with the BLM.

Mr. Bill Grant and I had a discussion prior to the start of the hearing this morning, in which Mr. Grant said he was disappointed we had not complied with Jared Carter's request.

Going along with what Mary Ann Eriksen just said is the fact our people are employed. We do have people working with us who are technical experts, but they are not employed by the Bureau of Land Management or oil companies, and they cannot afford to come in and work side by side with the BLM or the USGS.

Another key point on this is that in asking the citizen groups to offer technical expertise, we are at a very, very great disadvantage. A number of the universities and a number of the places where our technical experts work are heavily endowed by the oil companies. For example, Cal Tech recently received a million-dollar grant from Standard Oil, and an official high up in Standard Oil was appointed to the board of trustees of Cal Tech. So you can see that nobody from Cal Tech could openly give us data. Further, our experts are not allowed to come out in the open and say they are working with SEA because there has been intimidation. At some point I will give you specific examples, if you want, particularly with the Occidental Petroleum Co., our fight on that.

For example, the State of California keeps no records of oil-related accidents. One must ask the petroleum industry for their statistics. This was related to us by Mr. D. J. Everitts of the State lands commission, in 1971.

For example, the loophole which allowed major oil firms to charge double markups on oil was in part promulgated by an oil executive who had an obvious conflict of interest.

For example, the petroleum industry is trying to buy up any and all alternative energy sources. They haven't been able yet to buy the Sun, which is probably why solar energy hasn't been developed. And alternate energies and the need for congressional funding for a Manhattan type project is a whole other subject.

For example, while we were told the need for running the Alaskan pipeline down the Pacific coast was to provide California with fuel needs, a large percentage of that Alaskan oil is already earmarked for sale to Japan—providing the oil companies can drill off California.

Here again you have the autonomy of the petroleum industry to market this precious resource as they choose—for the greatest profit to themselves and the least benefit to the American people. And then they can scream to high heaven about the energy shortages.

National needs must be met on a broader basis before so cavalierly allocating our last resource.

There have been no independent oil studies, so we have no way of knowing the truth of actual reserves and energy sources. The petroleum industry has issued contradictory statements and questionable claims in their advertising. They also loopholed themselves out of the Public Information Act of 1968, which means they don't have to make what would normally be public records public. As one person put it, to look at their ads, you would think the oil refineries existed solely for the birds.

The credibility rating of the petroleum industry and those connected with it is as low as their profits are high. Those of us involved for the past 4½ years in trying to prevent Occidental Petroleum from

drilling in the Pacific Palisades can testify to that. Citizen groups must document what they say. The petroleum industry can buy false documentation for almost anything.

The oil companies embrace Project Independence, which would lead us into impulsive decisions, as if it were a dying, wealthy uncle.

We believe Project Independence is a charade—a hucksterish catch phrase being used to stampede public opinion in order to sign away to private interests that last, most vital public energy resource before the issues have been properly examined.

Members of Congress acted impulsively on the Tonkin Gulf resolution. They accepted at face value what the administration had said—and they lived to regret it. What we need, really, is exploration of the truth before we permit exploration of our precious and fragile ocean.

The petroleum industry would like you to believe that unless the OCS is immediately developed, our Nation will become subservient to the Arab nations both economically and energywise. Much more investigation is necessary here, too.

One wonders how much of a business an individual can own. Should we have a 51-percent control by an American citizen of any business in the United States?

The petroleum industry and the Department of the Interior would like a quick decision before there is any investigation, so they resort to scare tactics, and through manipulation of the petroleum cartel, the oil profits soar and the U.S. taxpayer and consumer pay.

For instance, the U.S. Government gets only 12½ to 16 percent of oil royalties, while foreign countries receive 50 to 70 percent from the same American-owned companies.

Such royalties were paid prior to the Arab embargo. The Outer Continental Shelf would give the oil companies cheap oil for which they could still charge the same inflated prices.

The oil companies argue that if there is a national emergency, it will be too late to set their production wheels in motion. I don't believe this is true. Congress can act very quickly when it wants to, and so can the petroleum industry. They have a lot of leases in the gulf area where they are not yet producing, and in other areas. The areas they already have leased should be produced before granting them more.

At this point I would like to read you a letter from Miramar on the Beach, Santa Barbara, Calif.

Gentlemen: Excuse me if the name of your association is not correct, but I heard a portion of an interview of one of your people on TV Sunday. It was relative to your concern about the installation of offshore oil drilling from Malibu to Laguna Beach. Beach front property owners in Santa Barbara County can offer much information about how difficult it is to collect from the oil companies after an oil spill. The beach front property owners original claim of damages was in excess of $110 million; after over 2 years of litigation our attorneys settled for $4,500,000.

If we can be of any assistance, please do not hesitate to write.

Very truly yours, William P. Gawzner, General Manager.

This is an example of what we are dealing with regarding liability and expediting of claims. This, too, must be streamlined before such a runaway program is permitted.

Additionally, all of us who have lived through many crises should have learned to store our walnuts for the winter. We urge Government

on all levels to encourage conservation and make a concerted effort to properly inform the people.

We should be using our wits to the utmost to build conservation into our way of life. Yet, Federal Energy Chief John Sawhill now claims we can do business as usual and the energy crisis is over. He claimed just the opposite a few short weeks ago.

One last point is the seismic activity in the California coastal area. Page 3 of the revised geology plan of the South Coast Regional Commission, which was adopted on September 17, states that there will be a probable increase of $21 billion in damages from seismic activity along the California coastline between now and the year 2000. An increase of $21 billion in the next 25½ years, and half of that seismic activity will occur in the Santa Monica Bay area.

This report also projects that withdrawal of oil can cause an increase of up to five times the seismic activity already projected, which would mean five times the damage and five times the cost.

Since this will be labeled "an act of God" by the oil companies, the taxpayers will foot the bill.

Certainly where there is such potential hazard, the State should have control over the decision. The people are already making their voices heard. They do not want the Outer Continental Shelf of California leased for offshore drilling. It can only end up in litigation.

In closing, there is a different kind of project independence necessary, and this I would buy—independence of Government of, by, and for the petroleum industry.

Thank you.

Senator TUNNEY. Thank you very much, Ms. Solomon. I am interested in two things. One is the geology plan the South Coast Regional Commission adopted September 17th. What is the South Coast Regional Commission? You mean the coastal commission? You mean that region of the coastal commission?

Ms. SOLOMON. That is the part of the coastal plan we are talking about.

Senator TUNNEY. The geology plan was prepared by whom?

Ms. SOLOMON. This was the south coast regional plan. I don't have my copy with me.

Senator TUNNEY. I think it is an interesting point that has been raised and one which I, in general terms of course, have heard of in the past as it related to other areas. I was not aware that in the geology plan the South Coast Regional Commission indicated that there could be such a substantial increase in earthquake activity.

Ms. SOLOMON. This was an amendment to their geology element and it was passed, adopted on the 17th.

Senator TUNNEY. This is obviously the kind of thing which would have to be taken into consideration by the Interior Department before they go ahead with their leasing program.

Ms. SOLOMON. We would hope they would. We don't know if they will but we would hope they would.

Senator TUNNEY. Well, it is one of the further reasons in my view that there ought to be a moratorium on leases until we complete our State coastal zone plan, until the legislature has an opportunity to adopt it and the Commerce Department to ratify it in order that this can be factored into any decisionmaking by the Department of In-

terior as it relates to the leasing of these offshore areas, these Outer Continental Shelf areas.

The other thing that especially interested me—you say that SEA is at the present time polling legislators to determine how they stand. Have you had any preliminary results yet from your polling activity? I was wondering where the California congressional delegation stands with respect to the drilling activity?

Ms. SOLOMON. We have just started on that. As you know, we have a number of honorary members. But we are just now beginning to really poll the overall group and we have no results. This is just something we have begun to undertake. It will take us a little time.

Senator TUNNEY. I would like to make the point that in the recent decision in *Askew* v. *Waterways Association*, which is a Supreme Court of the United States case, it was decided that the Federal Government has not preempted oil spill liabilities and that States can enact higher oil spill liability requirements if they so choose. Are you aware of that?

Ms. SOLOMON. I had vaguely heard something about it. The one thing that troubles me on things of that sort is that dollars do not necessarily equate themselves with safety and even if the petroleum industry were to put up funds for it, I don't know that that would change the situation as far as impact is concerned.

Senator TUNNEY. It might interest you to know that the American Law Division of the Congressional Research Service is doing a study now which has just begun on liability on oilspills. And it hopes to be able to conclude that study prior to the next session of Congress, beginning January of next year.

They will be working closely with the National Ocean Policy Study which the Commerce Committee is conducting on an ongoing basis. I think this could be important as we consider legislation for next year.

Ms. SOLOMON. Yes. It would be very valuable.

Senator TUNNEY. I want to thank you very much. As I have indicated to Ms. Eriksen, I know how difficult it is for persons to prepare statements for congressional hearings when they have many other responsibilities and when they are employed full time, in the study of these matters and I personally appreciate the efforts that you have made and I know other members of the committee do, too.

Ms. SOLOMON. Thank you. Thank you for having us.

Senator TUNNEY. Our next witness is Ms. Faye Hove of the Planning and Conservation League.

STATEMENT OF FAYE HOVE, PLANNING AND CONSERVATION LEAGUE

Ms. HOVE. Senator Tunney, I would like to especially thank you for holding the second day of the hearings on a Saturday so those of us who work could be here.

Mr. Chairman, I am Ms. Faye Hove. I live at 6922 Wildlife Road in Malibu and have been there for 19 years. Locally, I am president of the Malibu Township Council, an organization of property owners and residents, spanning the 27-mile-long Malibu coastline.

Today I am speaking as a member of the board of directors of the Planning and Conservation League of California. PCL is a coalition of 196 organizations concerned with the environmental conservation of natural resources and the need for comprehensive planning, especially in the area of land use. In addition to our organization members, we have almost 5,000 individual members throughout the State of California. Our principal activity is lobbying in the State legislature.

Senator Tunney, the Nation is well aware, by the initiative placed on the ballot, that the voters of California mandated preparation of a comprehensive plan for the future use of rapidly deteriorated shoreline and coastal waters.

The people of the State of California hereby find and declare that the California coastal zone is a distinct and valuable natural resource existing as a delicately balanced ecosystem. The permanent protection of the remaining natural resources is a paramount concern of the residents of the State and Nation. It is necessary to preserve the ecological balance of the coastal zone and prevent its deterioration and destruction. It is the policy of the State to preserve, protect, and where possible, to restore the resources of the coastal zone.

The Planning and Conservation League has worked with others for 5 years to breathe into life the present evaluation of the present condition of the coastal zone and based on these findings, a blueprint of further use for future generations. We would like to see the plan brought to fruition.

We urge the Federal Government grant no tract leases until the coastal zone plan has been presented to the State legislature and acted on by that body and the Governor. It must be emphasized that implementation is the critical thing we are talking about, to see whether there will be a successor agency and that the Governor will sign some legislation presented to the legislature. I have with me today an exhibit which portrays the varying degrees of health of the marine environment off the coast of three of the southern California counties.

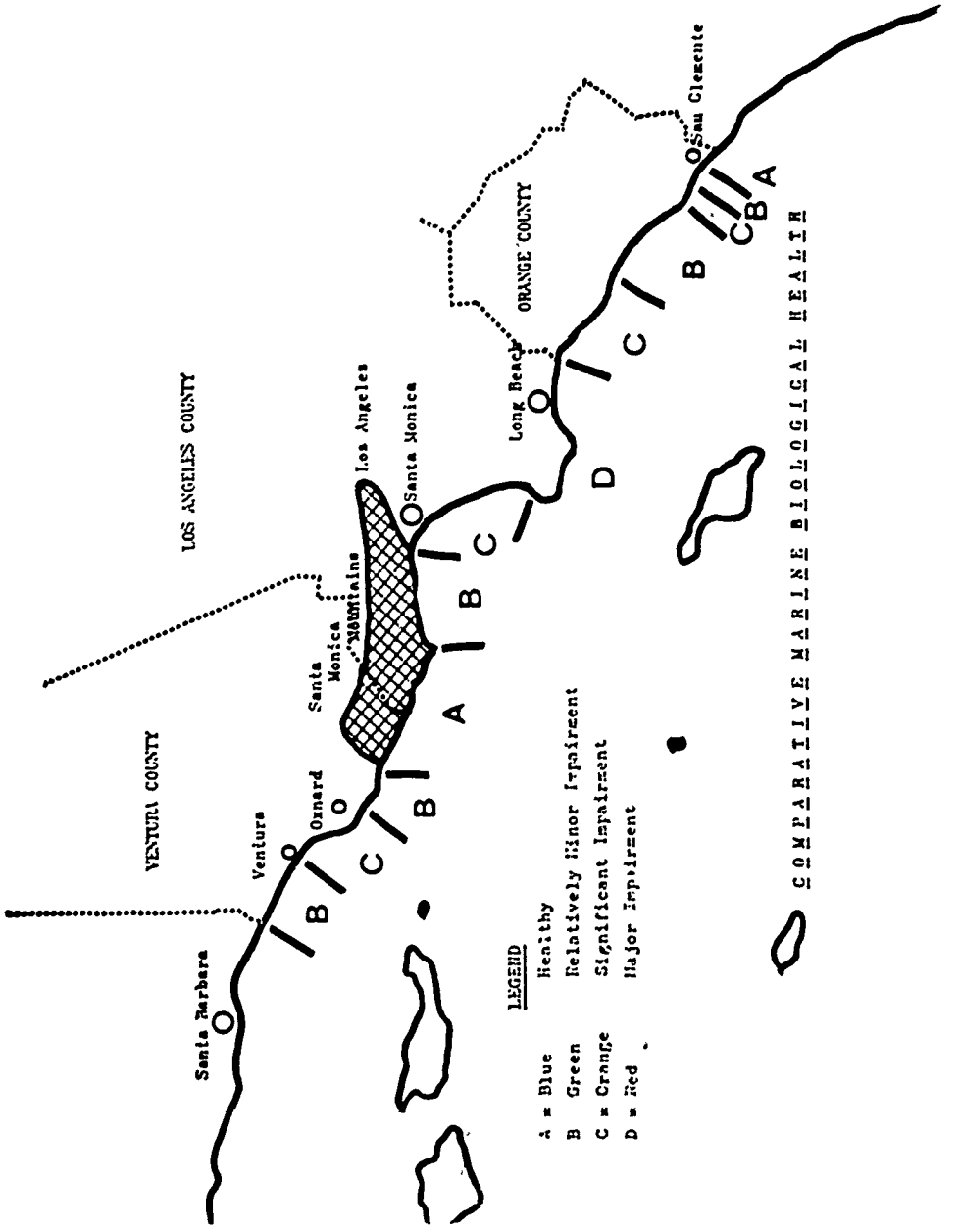
Senator TUNNEY. There is just one point that I would like to make and that is that the teeth are not in the National Coastal Zone Management Act with respect to consistency of Federal actions until the Secretary of Commerce approves the State plan, which it seems to me is also a very important additional step.

Ms. HOVE. Yes. I wish I had thought to add that in my testimony. This map was prepared based on a report to the Southern California Association of Governments of the health of marine coastal waters inshore waters in three whole counties—Ventura County, Los Angeles County, and Orange County.

The legend reads generally that healthy areas are in blue. There are just two. One is the Santa Monica Mountain area, and there is another, from Point Mugu to Santa Monica, at the base of the Santa Monica Mountains.

The green is relatively minor impairment. Significant impairment is orange and major impairment is red.

[The map follows:]


VENTURA COUNTY
LOS ANGELES COUNTY
ORANGE COUNTY
Santa Barbara
Ventura
Oxnard
Santa Monica Mountains
Los Angeles
Santa Monica
Long Beach
San Clemente
LEGEND
A = Blue Healthy
B Green Relatively Minor Impairment
C = Orange Significant Impairment
D = Red Major Impairment
COMPARATIVE MARINE BIOLOGICAL HEALTH

Senator TUNNEY. For purposes of the record, could you quickly identify the areas where there is generally healthy waters?

Ms. HOVE. From Point Mugu to Point Dume and the only other one is down in Orange County and a little into San Diego County.

Senator TUNNEY. Minor impairment is what?

Ms. HOVE. Minor impairment, north of the city of Ventura County, north up to Santa Barbara County line. Point Dume down to Santa Monica and another, I think that is the San Clemente area.

Senator TUNNEY. Significant?

Ms. HOVE. Significant impairment is the loop around Palos Verdes. As you know, the ocean waters and the sand move along the coast and sewer outfall has developed all the way to and including the Long Beach Harbor.

Senator TUNNEY. More major impairment is what area?

Ms. HOVE. I am sorry. That is what I gave you. Orange areas are from Santa Monica and this is significant impairment. It spans from Santa Monica to just beyond El Segundo Beach, the beginning of the Palos Verdes Penninsula, the north coast of Orange County from Long Beach and Los Angeles County down to San Clemente, and another tiny stretch in the south coast of Orange County.

Senator TUNNEY. In Los Angeles and Orange Counties, approximately half the coastline area is either subject to significant or major impairment as I look at the map.

Is my observation correct?

Ms. HOVE. Yes. There isn't much leverage. More than half is already degraded. The total of the green and blue areas is not as great. I must step aside and point out to you, because of your interest in the Santa Monica Mountains in your legislation, that the healthy marine environment in the Los Angeles County area near Santa Monica is largely due to the fact we have had very little development in the Santa Monica Mountains.

We hope in California to preserve the healthy areas with the Coastal Act and to protect what is left and then where possible, restore these areas that have severe impairment. The proposed oil drilling tract lease area is also shown off the shoreline of these three counties and surrounding entirely three, and part of the fourth, channel islands.

You might want that in the record in words as well.

Senator TUNNEY. Where did you get the data base that enabled you to make that determination?

Ms. HOVE. The biology of inshore waters is documented in a report by Dr. Rimmon C. Fay, marine biologist, to the Southern California Association of Governments. He did this work on a consultant basis. We translated his maps into this one.

Senator TUNNEY. Can we get a hold of that report?

Ms. HOVE. Yes. I will make an effort to see you get one.

Senator TUNNEY. We would like it included as part of the record.

Ms. HOVE. The shaded area is a conceptual boundary copied from a newspaper map. We do not question that oil is also a resource. However, we feel that decisions about tract leases in Federal waters cannot be made with any degree of confidence until the environmental impact report has been prepared and full public hearings held.

There are too many unanswered questions about the impact of construction projects on the health of the marine environment which is

the point of my testimony today, as presently shown on this illustration. There are questions about the magnitude of piping and onshore installations required to service the offshore oil rigs and about the state of art of prevention of oil leaks and oil spills. I do not read journals about the oil companies but I have talked with some people who worked in the industry and they don't seem to indicate to me that there is enough redundancy in safety equipment as is presently required in the nuclear industry where you have backup systems, and so forth.

There is still a question about the liability of cleanup and restoration of coastal waters and the land in the event of damage. I agree that dollars and safety can never be equated. Someone might get reimbursement but will the species come back? Finally, until we have a firm national energy policy, the actual state of oil requirements and the tradeoffs to be made in a sound and sane program for the long-term decision should not be made to grant tract leases off the coast of the United States.

I didn't stop at California that time.

Senator TUNNEY. Thank you very much, Ms. Hove. I appreciate the testimony and the efforts that you have undertaken to prepare that map and I would appreciate it if you could get that consultant's report for the committee.

Ms. HOVE. The reason I mentioned at the outset that I am president of the organization in Malibu was that this was prepared for that organization. It was not a PCL exhibit. What we hope to do with it is change the colors and have it reproduced in black and white and we will send you a copy.

Senator TUNNEY. Thank you very much.

We have public witnesses who have asked to be recognized.

Unfortunately, I am going to have to leave in 20 minutes because I have another commitment this afternoon. There are five witnesses. They have indicated they would like to testify. Any statement you want to provide for the record, of course, will be incorporated in the record. But we are going to divide the 20 minutes into 4 minutes apiece. We will have to put a clock on you because I must be someplace else at 4 o'clock and it will take me some time to get there.

Our first witness is Mr. William Gesner who represents the Environmental Quality Advisory Board, Santa Barbara.

STATEMENT OF WILLIAM GESNER, ENVIRONMENTAL QUALITY ADVISORY BOARD, SANTA BARBARA, CALIF.

Mr. GESNER. Thank you. I will go from there. I am a former oilfield worker with 5 years' experience in offshore oil well drilling on several platforms and two drilling barges in the Santa Barbara Channel. During this time it became obvious to me that offshore operations were conducted under very unsafe conditions both on Federal and State leases. Drilling regulations for both State and Federal offshore areas are inadequate. Both specify only once a week blowout drills while experts in the field of blowout prevention insist on daily blowout drills for each crew.

Much reference is made to the Union Oil Well A21 blowout January 28, 1969. Yet it is a fact that on February 24, 1969, well A41 on

the same platform blew out of control, contributing probably as much or more oil to the channel as did the January 28 blowout.

The State lands commission continually brags about no oil being spilled on State offshore leases. In 1967, while working for ARCO on Platform Holl- located on State lease PRC-3242, a pumper closed a valve, then went to sleep; the closed valve caused a tank to run over. spilling oil into the ocean from midnight until daylight the following morning. This oil probably washed up on the beach along with dead seals and sea gulls that landed on a nearby buoy used for tying in supply landing of the production deck and conduct target practice on seals and sea gulls that landed on a nearby buoy used for tying in supply boats.

Since a representative is here from the Department of Interior, I would like to go on record and advise him that I have documented proof of a violation of Federal rules and regulations on OCS lease P0241. Also, I have documented proof that a special investigator for the Department of Interior, Mr. J. B. Letcher, did willfully and knowingly fabricate a completely false report in an attempt to cover up these violations. During fiscal year 1972 the GAO found 76 violations of Federal regulations on five platforms in the Santa Barbara Channel.

In June 1973, a 10-member special review committee was set up to advise the Geological Survey on safety and pollution control of OCS petroleum operations. Apparently this review committee also went to sleep. According to a May 10, 1974, news release, the USGS, the agency responsible for regulation of offshore drilling, has been secretly clearing its proposed regulations with the oil industry before making the regulations public.

Caught in the act by Congressmen Reuss and Vanderjagt, the USGS announced that it would stop the practice and make all future regulations public.

So, it seems that the regulatory agencies are better known for their impotent, evasive actions than for guarding the public's interest as a responsible Government agency should.

Mr. Stinehard of the DuBridge panel says, "The oil industry weighs carefully the potential losses from chances and shortcuts that it takes, against the increased production costs it would incur if it made maximum provision for safe operations."

So, I think southern California would be much better off without the accident prone offshore oil industry, administered by its inept regulatory agencies, being allowed to drill offshore California at this time.

That is my opinion.

Senator TUNNEY. What about better technology?

Mr. GESNER. It would be improved, yes.

Senator TUNNEY. If you have any additional thoughts after you have a chance to think about it for a bit, would you write a letter to the committee which we would include as a supplement to your statement, giving us indications where you think that better technology is needed and where you think the regulations ought to be tightened up by the USGS?

Mr. GESNER. I would be happy to.

Senator TUNNEY. If you could do it within the next week or so, we would appreciate it.

[The letter follows:]

SANTA BARBARA, CALIF., *October 7, 1974.*

Hon. JOHN V. TUNNEY,
U.S. Senate, Washington, D.C.

DEAR SENATOR TUNNEY: In regards to your hearings on National Oceans Policy Studies of the Senate Commerce Committee held in Santa Monica Sept. 27 & 28, 1974, at the conclusion of my statement you requested that I should send you suggestions for the further improvement of regulations as they pertain to safety in offshore drilling.

1. Revise OCS Order No. 2 to include mandatory daily blowout drills for each crew.

2. Revise Title 43 of the Code of Federal Regulations—Part 3300—Outer Continental Shelf Leasing: General—Subpart 3304—Bonds: to require the discontinuance of the geographical area bond and institute a mandatory corporate surety bond in the sum of $250,000.00 for each individual OCS lease.

3. Two members acceptable to environmental groups should be added to the Review Committee on Safety of Outer Continental Shelf Petroleum Operations (E-27).

4. The Department of Interior should sanction increasing royalty payments, cancelling leases and limiting lease bidding to only clean and safe offshore operators to ensure compliance of federal regulations.

5. The pasage of S. 2858 as is.

I hope this information will be of some value.

Sincerely yours,

WILLIAM GESNER,
Santa Barbara Environmental Quality Advisory Board Member.

Senator TUNNEY. Our next witness is Gerald Shaflander.

STATEMENT OF GERALD SCHAFLANDER

Mr. SCHAFLANDER. Thank you, Senator Tunney and staff. I want to make three comments and then I would like to submit a statement later. I am a political sociologist. The last book I wrote was about the oil cartel. I am concerned with the Consumer Solar Electric Power Corp. I want to do three things in 4 minutes.

No. 1, I noticed the story in this morning's Los Angeles Times, which talked about potential reversal of Mr. Sawhill's position. I suggest the fifth paragraph in which the former executive, Mr. Ligon, pointed out—he cautioned the Department of Interior has the final say when the lands are leased. It is important that the Interior Department is going to be a decisive factor.

No. 2. I would like to point out in the last 16 years, 10 of the 11 heads of the oil and gas department, Department of Interior, have since gone to major oil companies. I would submit that that doesn't necessarily mean they were on the payroll of the oil companies but I would suggest they didn't do anything so serious during the tenure that they didn't get employed by the oil industry.

The head of the Oil and Gas Department of the Department of Interior, one after another, Dickerson, Connor, Joseph Simons, Wilson, Laird, one after another took key positions in oil companies. Likewise, two-thirds of the key executives come from oil companies. It is a conduit into and out of the oil companies and back to it. I guess the Dracula blood bank and fox and chicken does have some implication as the Robert Dunlop scandal in FEO. Is there a real shortage? We don't know, Senator Tunney. We don't know because we have no access to reserves. I submit it is a critical problem for the Senate and House.

How can we talk about alternatives or need for drilling when we don't know how much oil exists. I would like to say I am concerned

there is a conspiracy. I am absolutely certain they meet in the Haig and decide what to do or not do.

One needs not have the burden placed on him to look at the parallel activities that take place. We can't believe the oil companies and listen to them.

One last point in this vein I would like to make is I think method in this country has to be explored and that is that there are independent Arab States that make independent oil companies by themselves.

Exxon and others play a leading role in it. May I suggest the Arabs can't eat and drink their own oil. They have no ships, refineries, or pipelines over the world. Does one believe Aramco is opposed to what the Arab oil states are doing? Does one suppose the increase in prices is opposed to what the oil companies want?

I admit that Arab States operate independently by themselves with an interest, overt or covert. I want to submit to this group we have had solar power for 2½ years in this country. Three scientists, funded by the National Science Foundation, have broken through with this. We have formed a private company to do this. The Atomic Energy Commission is hardly the place for solar power to be put. I suggest the bureaucratic investment in the liquid fast metal breeder reactor makes it impossible for them to monitor. There has to be a realization that the technology is here. The problem is cost.

We have no Manhattan Project in solar power. Our company may or may not be successful but the Senate, House, consumer, and environmental groups need solar electric power piped in. It is here. The technology is established. Those tests are available for public scrutiny. Thank you very much.

Senator TUNNEY. I want to tell you I think you crammed as much pertinent information into a 4-minute presentation as I have heard.

Mr. Shaflander, the committee very much appreciates your testimony and I know that we look forward to getting your statement in a more full form because I think you have raised four extremely important points and I know that other Senators will be as interested as I am in what you have said and what you can say in an amplified form.

[The following information was subsequently received for the record:]

INDIVIDUAL STATEMENT BY GERALD M. SCHAFLANDER, POLITICAL SOCIOLOGIST: AUTHOR: VICE PRESIDENT CONSUMERS SOLAR ELECTRIC POWER CORP.

I am opposed to offshore drilling, deregulating natural gas, nuclear power expansion and other such polluting and radiating steps proposed by a profit swollen Oil Industry in the name of Project Independence, National Security, and economic growth.

John Sawhill, Czar of the Federal Energy Administration, has been talking out of both sides of his mouth of late concerning offshore drilling leases in California to be issued to Exxon. Last month he said, "There *will be* drilling offshore (for Oil) in California. It will be developed." Since then, Mr. Sawhill has been refusing to take responsibility for the scandal in his own FEO wherein "double dips" have been given quite freely through (conflict of interest loophole) grants to oil companies by FEO employees on loan from Oil Companies.

Several hundreds of millions of dollars have been siphoned into the already swollen coffers of the Oil Companies with more than a little help from Simon's and Sawhill's FEO. But Sawhill and his ex-boss, William Simon, now Secretary of the Treasury, can't quite fully explain and put a handle on how the double dip ice cream cone was sold for free.

But Sawhill has now seemingly backed down from his defiant and arrogant stand on behalf of Exxon, last August. On September 27, in testimony before the Senate Commerce Committte under Senator Tunney, Duke R. Ligon (formerly a Continental Oil Executive), Assistant Administrator of the FEO, said that the Federal government may wait until the state coastline plan is adopted before leasing lands off the Southern California shoreline for oil development. Such an action (the *Los Angeles Times* said) "could delay the lease sale for at least two years." Ligon said he had cleared his statement (directly opposed to Sawhill's previous statement) with "John C. Sawhill, head of the FEO." Ligon cautioned however, that the Department of Interior will have the final say in when the lands are leased, although the FEO will have an input in this decision.

Clearly a decision *has been made* to lease the offshore California areas for drilling. And Sawhill is slithering and ducking from the repercussions of his statement by hiding behind the Interior Department's ultimate authority. The Interior Department, urged on by Sawhill and Simon, are hell bent to speed up production of fossil fuels along with accelerated production of nuclear power. These goals are equally supported by the AEC and the Oil Cartel.

The Interior Department has a long and inglorious record of being supine and ineffectual in the face of the Oil Cartel's pressure and infiltration. Santa Barbara; Louisiana Gulf Coast offshore fires and spills; Camp Breckinridge; Oil Shale and other Giveways have long since been identified as Interior Watergate type scandals.

Fundamental questions have to be asked at this critical point in a national energy crisis situation.

Is there a real shortage of oil and gas?

Why must there be offshore drilling?

Who controls offshore drilling?

The Oil and Gas Office of the Interior Department has long held the responsibility and authority for all offshore drilling and the issuance and awarding of contracts for leases. How fair, competitive, and public minded are the officials who awarded offshore California drilling leases to the world's largest and most profitable Corporation—Exxon?

Is it important that there has been a steady flow of Oil Company executives moving back and forth between the Interior Department's Oil and Gas Division and the Oil Companies? Is it possible that these following Interior Officials would be hired or rehired by Oil Companies if they had been tough or hostile to "Oil" while working for the Government in Interior? Hardly.

Ralph W. Snyder, Jr.—served as Associate Director of the Office of Oil and Gas from 1949–1973. In 1973, he retired from Government service and has been retained by the Tesoro Petroleum Corporation. He also served as advisor to the Assistant Secretary of Mineral Resources.

Joseph J. Simmons—was Assistant Director of the Office of Gas and Oil from January 18, 1966 to May 12, 1969. He is presently serving as V.P. of Amerada-Hess Oil Co.

John Ricca—served as Deputy Director of the Office of Gas and Oil starting in January of 1966. He served as Assistant Director of the same office from July 1962. Before that, Mr. Ricca spent 17 years in Oil Operations with the Arabian-American Oil Co. (Aramco), dominated by Exxon.

"The Assistant Secretary for Mineral Resources, *Hollis M. Dole*, is a former geologist from the state of Oregon with a record of sympathetic operation with the mineral Industry" according to Lawrence Stern in the *Washington Post*, January 31, 1970. On March 12, 1973, Dole became Senior Executive Vice President of the Atlantic Richfield Oil Shale development program. Atlantic Richfield recently took a dominant ownership position in the Tosco Oil Shale Corporation of Denver Colorado . . . the leading oil shale lease-holder and potential producer of oil shale in the country. Standard Oil or Ohio has been in and out of Tosco as well.

The Deputy Assistant Secretary of Interior, *Gene P. Morrell* (who was also a Director of the Office of Gas and Oil) was a lawyer for the Oil Industry before coming to Washington. On December 6, 1972, Morrell accepted the position of Vice President of Lone Star Gas Company in Dallas, Texas.

Dr. Wilson M. Laird—before coming to Interior where he headed the Office of Gas and Oil, was a consultant for the Carter Oil Company, now Exxon. From 1969 to 1971, he was Director of Exploration for the Office of Gas and Oil. Recently he joined the AMERICAN PETROLEUM INSTITUTE (API), the Washington arm of the Oil Industry, as Vice President of *EXPLORATION*.

Joe T. Dickerson—was named Director of the Office of Gas and Oil in 1964. Before that, he was with Skelly Oil Co. of Tulsa, Oklahoma; was Executive Vice President of Mid Continent Oil and Gas before joining Interior. He succeeded *Jerome J. O'Brien*—who returned to private industry where he was elected President of the Jade Oil and Gas Co.

Lawrence J. O'Connor—served as Assistant Director of the Office of Gas and Oil starting in 1959. From that job, he went to the Federal Power Commission (FPC) and, from there, he went to Standard Oil of Ohio as a Vice President in 1971.

This is but a quick glossary of the *interrelationships* between the Oil Industry and the Office of Gas and Oil at Interior. What do we know about the present Interior Department officials, purportedly representing us (as their predecessors never did)? What do we know of their past affiliations with Oil companies? How do we know that plans haven't already been made for these Interior officials to join the large Oil Companies after their present service in the interest of the U.S. Government and the consuming public?

If the Federal Energy Office has been generated (by a Mr. Bowen on loan from Phillips Petroleum) and handed a windfall to the Oil Companies through a bureaucratic twist of regulations . . . if previous scandals within Interior have not yet been officially detailed and explained before Congressional Oversight Committees . . . how do we know whether or not skullduggery and favoritism—around conflicts of interest—have led to the critical decision-making by Interior's Office of Gas and Oil in awarding leases in Southern California for Exxon to exploit? Is there really a basic shortage of oil that could conceivably justify a decision to start drilling off the California shelf? Did we have a real or fake-manipulated oil-gas shortage, as 67% of the people polled by Harris and Gallup perceived it? Why can't we find out the absolute truth about the shortage? What is the actual, specific oil, gas and coal reserve status? Why can't the House and Senate find out? Are the Oil Companies and their API lobbyists so powerful they can even stop a full-scale investigation by our elected representatives of this vital issue? We simply must pass a law that mandates independent, full studies of the state of reserves—underground—held by the Oil Companies.

Quite frankly, environmentalists, taxpayers, and voters have every right to know just how short we are, and how badly oil is needed for pseudo-national defense, security, etc. The burden of proof should rest on the Oil Industry and the Congress—not on the shoulders of the consumers who are paying through the nose for gas, oil, and coal ad nauseum—unless they are to *freeze and/or walk in the dark with a pistol to their heads.*

The need for a trade-off is both relevant and long overdue. We should not be asked to even consider allowing offshore drilling by Exxon unless and until full reserve data is forthcoming. When and if coal, oil and gas reserve storage facilities are made public by Exxon for said checking, independently and scientifically garnered, then and only then should citizens be asked to *start* considering the necessity of offshore drilling to offset a real shortage.

Another myth and imagery shibboleth that needs to be examined by the Congress and thinking Americans is the myth that Arab states operate in a vacuum—that they operate independently—and that they are extorting high prices for oil out of the hides of the world consuming market!! In short, are they the real enemy? Is there a solid basis for a Project Independence to protect Americans from foreign oil stoppages? Or is this another fake-manipulated crisis created with the implicit and indirect support of the Oil Cartel—led by Aramco (Exxon)? The Oil Cartel obviously has enormous influence on most acts of the Arab oil states, particularly OPEC. Can the Arab states realistically eat and drink their own oil no matter how independently they SEEM to be in control of the sale of their own oil???

Do the Saudi Arabians, Kuwaitis and Iranians—among other oil states—have ships and tankers to transport their own oil around the world? Do they have refineries around the world—strategically located—to break the 'crude' down into various components? Do they have their own pipe lines to move the gas and oil across continents? Do they own the wholesale and retail outlets in industrialized countries in North and South America; Canada; Australia and New Zealand; Europe; Far East—which distribute end-oil products to consumers? Of course not.

The Arab states cannot eat or drink their own oil. They obviously have a strong need to cooperate with Aramco and other major, international, multinational Oil Companies. Exxon and the other 6 sisters (majors) control most of the resources

and facilities delineated above, through joint ventures. It's hard to believe that the Arab states make solely independent decisions about raising the price of oil (which, incidently, the 7 sisters loved and greedily accepted). Can the Arab states really shut off oil—raise prices capriciously and irresponsibly—without the minimal, implicit support of the giant Aramco International Oil Cartel interests??? It seems highly improbable. Overtly and covertly, the recent oil-Arab boycott greatly helped the profits of the major oil companies—as they escalated three-fold to all time highs.

Exxon plays it both ways: They reap the profits from Arab Oil shutdowns; they raise their prices as the supply dwindles; and then, playing the role of patriotic, jingoistic *'Americans first'*, they lobby and push to receive special leasing rights from Interior to drill for oil off the California shelf—in an effort to make the U.S. independent of Arab (Exxon) foreign oil shut-offs.

But far more basic, is the Oil Cartel's *fear of the sun* and alternative energy sources free of the Oligopolistic control of the 7 sisters. The sun is infinite and free; it can't be hidden underground; it has unlimited and visible resources; it can't be tax-depleted; it can't be intangibly drilled; it can't be capital gained; it can't be manipulated on a turn on—turn off basis.

Solar Electric power (not the amorphous solar energy) is a known quantity; it powered astronauts to the moon via solar cells. These cost-prohibitive single wafer cells have proven themselves in every technical way except the inordinate cost of said wafer cells—hand cut. Unlike most other exotic, alternative energy sources (widely and ignorantly talked and written about), solar electrical power is here, scientifically beyond the batch processing—especially in the terrestrial photovoltaic solar cell technologies of *thin film and Edge Defined Ribbon* (EFG). The National Science Foundation financed lab work and scientific breakthroughs which they have nigh-criminally held back because of bureaucratic time tables calling for final factory production by 2000-2010.

The Sub-panel 9 report, hidden and blocked by the Atomic Energy Commission until Senator Abourezk uncovered it under the Freedom of Information Act, clearly and scientifically states that photovoltaic solar power cells *have been produced* and minuscule funding should show its mass production capability and cost competitiveness by the mid-1990's. (See the New York Times clipping).

[From the New York Times, Apr. 1, 1974]

SOLAR ENERGY DATA IGNORED BY A.E.C., A SENATOR ASSERTS

WASHINGTON, March 31.—Senator James G. Abourezk said today that the Atomic Energy Commission was apparently withholding evidence that solar energy can be developed far more quickly and cheaply than previously believed.

The South Dakota Democrat asked the Government Account-Office to investigate "evidence of solar energy feasibility contained in a report prepared by the A.E.C.'s own scientists."

The evidence was ignored and "even openly misrepresented in the A.E.C. chairman's public report to the president and in a series of impact statements on proposed atomic energy projects," Senator Abourezk said. "I would like to know why the A.E.C. has been sitting on scientific data pointing the way toward solar power while major oil companies are quietly moving to take control of the means to produce solar power."

Mr. Abourezk said the commission recommended only $200-million on solar energy development for a five-year period starting next year, out of a total recommended expenditure for energy research of $10-billion.

The commission's scientists reported "that a minimum of $400-million should be spent and that $1-billion ought to be spent," Senator Abourezk said. "The G.A.O. should find out what justification there is for this five-fold reduction in recommended funding."

Meanwhile, he said, the big oil companies are moving into the solar energy field.

"The facts show that the Exxon Corporation has recently bought the Solar Power Corporation of Braintree, Mass., while Shell now controls a company called Solar Energy Systems and Gulf is developing solar energy technology through its Gulf Atomics subsidiary, the Senator said.

"Major oil companies already largely control coal, oil shale, uranium and geothermal steam," Mr. Abourezk concluded. "If they now gain control of solar energy, they will further eliminate all interfuel competition."

Now, the "Final Report of the Solar Energy Task Force to the Federal Energy Administration, August 19, 1974" on solar electric power is out (under wraps)

and trumpets: "solar electric power is feasible. The only necessary step now is *cost reduction;* and that can be achieved through *mass production.* That's the *only* problem remaining."

Our small, undercapitalized, *Consumers Solar Electric Power Corporation* has made small batches of solar cells on a continuous flow, automated process in conjunction with several brilliant scientists. In our five month corporate life, we've learned much and suffered much in a Class B Hollywood movie fashion. But we have made dies that don't contaminate, unlike Tyco and Mobil; we have learned how to use semi-conductor technology and semi-conducting glass to increase the efficiency of thin film, photovoltaic solar cells.

We have only raised nickels and dimes because most venture capitalists we've met are concerned with fears of competing with the Oil Industry; or, are worried over the ultimate capital necessary to build a 1,000 watt solar power station; or, are worried that unlimited funds will be necessary to complete our next stage of building two solar cell arrays to be tested by the Electric Power Research Institute and NASA's Jet Propulsion Labs.

CSEP has concentrated upon producing thin film and EFG photovoltaic solar cell arrays for sale to Electric Utility Companies. It is the marketing philosophy of this Corporation that we can directly transform solar energy into solar electric power and thus, invert and "bus" this power directly into existing Utility electric grid wire systems.

We have constantly been blocked by the National Science Foundation and the Atomic Energy Commission who have threatened and prevented Drs. Paul Fang and Ronald Wichner from consulting with us on their own time. These Government bureaucracies, who have poured welfare handouts and "socialism for the rich" into Oil Company hands for decades—in great profusion—have been publicly exposed as covering up the sun, and propagating the line that solar electric power is "twenty years away". They have been extremely hostile to this Corporation's thesis that: solar electric power is *Here now,* and we only need to organize the proper management team and secure adequate financing to generate a cost competitive, alternative, non-polluting and non-radioactive form of solar electric power (in 1974–1975) to be sold to utility companies.

Oil Company obviously will not invest capital in *developing* Solar energy.[1] The Interior Department, Atomic Energy Commission, National Science Foundation, and Department of Defense are clearly tied and committed to protecting their own bureaucratic investments (and the oil Cartel's) in coal and uranium (nuclear power) and long range solar Research & Development.

Therefore, an entirely new and unique mechanism must be established to develop Solar Electric Power. Solar electric power is Here Now and must be *privately financed initially*—if it's to convert daylight into electrical power before 20 years more of radiation, pollution and escalating prices from the Oil Industry overwhelm us.

We are confident that we can complete the next critical stage of our development if we can raise about $700,000 for necessary machinery, leased plant, raw materials, and technical and administrative overhead for a 90 day crash production period. After we successfully complete this next stage, we hope to go public with the approval of the SEC. Whether we succeed or not—the fact that solar electric power is here in 1974, must be understood and acted upon by responsible citizens and lawmakers.

Our next witness is Alex Mann.

STATEMENT OF ALEX MANN

Mr. MANN. Thank you for making Saturdays open for citizens who can't otherwise attend. My name is Alex Mann and I live in Santa Monica Canyon. I would like to read a letter which the Santa Monica Canyon Pacific Association recently sent to Assemblyman Howard Beerman, who is our location representative for the State level.

I think it is relevant to the function of the Senate Commerce Committee what we are suggesting to Assemblyman Beerman. I will read a portion of this.

[1] Only *controlling* and *smothering* solar cell technology (Exxon, Gulf, Mobil, etc.).

In a recently published record entitled, "Energy," which was a rough draft for technical review purposes dated July 26, 1974, and put out by the South Coast Regional Conservation Commission, the report discusses the suitability of the underwater portion of Santa Monica and Redondo Canyons as supertanker loading areas. Both of the canyons are deep and could accommodate ships that draw large depths of water. This upset us when we say this being considered. But going on, the thing most pertinent to your committee, the South Coast Regional Conservation Committee report, p. 295, and the press reported that a major portion of Alaskan oil is to be shipped to Japan.

Executives of one of the companies operating in Alaska—one was a chemist and one an environmental scientist—have informed us that much of the Alaskan oil is lower in sulfur content than the California offshore oil.

Now, we raise the question, in the letter with Assemblyman Beerman, is offshore drilling going ahead because of momentum of marketing decisions already made by the oil companies and possibly by some of their cohorts and Government regulatory agencies?

Since matters of marketing policy, both national and international, fall, I think, within the purview of the Commerce Committee, I think it might make relative sense to have investigations of the data which we currently don't have. As previous speakers have said, the Government seemed to get its data from the oil industry, hiring the 23 oil executives as the previous speaker had alluded to.

Admittedly, there are severe gaps in our information and that of the Federal and State governments. We have many questions but not many of the answers needed to develop workable alternatives to the destruction of our coastline. Is offshore drilling necessary or desirable if it results in a refined high-sulfur oil that will cost more to produce and generates more smog? Should the marketing policies prevail by default and deny Americans access to crude oil of lower sulfur content?

This, I think, would be pertinent to the committee to look into some depth.

The other thing I wanted to bring to your attention, and I think it merits some inquiry in the pamphlet of offshore petroleum studies done by the Bureau of Mines information circular 1973. They state the success ratios were not included in this report because offshore data are held in confidence, making success ratio data incomplete. I think this amplifies what Ms. Solomon referred to earlier that, due to trade secrecy laws, both under California law and under Federal law, we are not able to comment intelligently on the EIS because we are not allowed access to the kind of information which is in the oil company logs and their geological reports.

We can't really respond to these statements because we just don't have the information and, again, this is a matter that falls within the purview of the Commerce Committee and ought to be the subject of oil records and executives being subpenaed.

Senator TUNNEY. What did you read from there, Mr. Mann?

Mr. MANN. That is the Bureau of Mines information circular 1973 and the number the Government Printing Office has is IC8575.

It was presented, as I said, in 1973, and written by some oil-petroleum engineers.

One other thing I would like to say is that a number of people have remarked, Senator Mike Gravel among them, in talking about Elk Hill reserves. It is low-sulfur oil. We have been thwarted in getting access to the oil. It is part of a military reserve. The interesting thing about the local field is, under the Defense Production Act of 1950, the amount of oil being consumed has constantly gained momentum and the push for exploration has gained momentum because under the law the Secretary of Interior is charged with the obligation of gathering more and more sources to be put aside for purposes of national security.

Even with enough oil from Alaska to take care of our foreseeable needs until 1985, the consumption of oil by the military forces has increased at such a rate that currently the military are using the projected use for 1974 which is something like 350,000 barrels, or 10 percent of the national consumption.

There is a certain impetus under the Defense Production Act which I think is relevant to your committee because the Secretary of Commerce has certain obligations under that law to see to it that transportation resources, tankers, and things of that nature are related to the real need.

Senator TUNNEY. Thank you very much, Mr. Mann. If you have anything you would like to add in the way of amplifying that statement in writing, please do so.

Our next witness is Alex Cota, president of East Side-West Side Concerned Citizens.

STATEMENT OF ALEX COTA, PRESIDENT, EAST SIDE-WEST SIDE CONCERNED CITIZENS

Mr. COTA. I have to say at the outset, I want to protest the fact the general public was not given ample notice prior to this meeting. When Jared Carter was heard, we found out in the nick of time. We had to run up and down the hillside with leaflets. We spent 2 days here and we were given 4 minutes. We have to protest because it is more important to talk about alternative energy sources than drilling in the way we have.

We cannot trust the oil companies for many reasons. Currently we are being told the costs are too high to get away from oil. Yet, we have to spend $45 billion to import oil and gas from Russia. We are going to give them low-interest loans. I have an article from the Los Angeles Times, it is entitled, "Senators See Flaws in U.S.-Soviet Gasline." Multibillion-dollar proposals for developing supplies in the Soviet Union could increase the country's vulnerability for outside pressure. It names all the gas and oil companies. For example, Occidental Petroleum is involved deeply. We are going to spend $45 billion American import-export dollars and they will pay us a minimum.

This is absolutely terrible.

Senator TUNNEY. Can we incorporate that in the statement?

Mr. COTA. I have to hurry because I have been given so little time.

Senator TUNNEY. You can make a prepared statement.

Mr. COTA. I am a little disturbed, sir. There is another reason why we cannot trust the oil companies.

There is from the Journal of Commerce, an independent review, Monday, August 12, 1974, "Exxon Battles Guidelines on Sea Pollution." The Exxon Corp. is locked in a legal battle against Federal guidelines which will limit the amount of grease an oil company is allowed to drop in the ocean after 1976. The New Jersey-based corporation has filed papers in the superior court of Morristown, N.J., saying the guidelines were invalid because they were never brought before the public hearing.

Exxon has been granted permits by Federal authorities to allow water to run into waterways leading into the ocean and storage terminals. The guidelines limiting the amount of oil and gas contained in the runoff water have never been legally adopted.

Also named as defendants were the EPA and Delaware River Basin. Public hearings on the guidelines were refused. Exxon is asking for a court ruling on the validity of the guidelines because it is anticipating building an additional five terminals.

We cannot trust the oil companies. It is again from the Journal of Commerce, an independent review says a thin invisible film of oil on the ocean's surface may be a greater threat to the environment than unsightly slicks and lumps of oil floating in the sea. It is possible we are not talking about the most important thing when we speak of oil lumps.

Some scientists now believe as much as 95 percent of the oil floating on the seas arrived there via the atmosphere from land-based operations. The composition from 300 billion tons of water entering the atmosphere is the same——

Senator TUNNEY. You can include that in the record.

Mr. COTA. We are subjected to this headline, "50,000 Oil Wells in Santa Monica Bay."

I will turn it so the audience can see it. We are more concerned than for esthetic reasons. We should concern ourselves with alternatives to drilling period, not because it doesn't look good. It doesn't make sense to burn oil. This natural gas deal with Russia, Occidental Petroleum will give scarce chemicals, fertilizer, to Russia for oil and gas, which we have developed at our own expense.

We cannot trust the oil companies, not only for esthetic reasons, but good conscience. I will go to what we can do as an alternative. This is from the Los Angeles Times, Thursday, August 22, 1974, "LA County Warms Up to Capturing the Sun's Energy." This is what we can do in the alternative. We have results of experiments conducted on the roof of the county's medical department of the solar energy age—this is right now—it puts Los Angeles into the solar energy age. What we have learned is assurance enough for the county to consider construction of all solar buildings to conserve energy and reduce fuel costs. To test the effectiveness of various devices or capturing and utilizing energy from the Sun is an alternative.

Each panel was connected by waterlines to a 1,100-gallon above-ground plastic swimming pool.

The temperature was recorded as it flowed in and out of the panels. The most efficient panel of the group captured 98.02 Btu's, per square foot per hour. It raised the temperature of the water 3 degrees each time it passed through the tubing. If not controlled, the water would go from zero to 70 degrees in the morning to 90 degrees at nightfall.

Now, if this water will boil, we can create steam; with steam we can get the electricity we want.

With electricity we can get hydrogen. More than 2 years ago I begged our leader to go to UCLA and support this. Our country is in danger. There is a brochure I am quoting from. It is entitled "UCLA Hydrogen Car." In October of 1970, several UCLA engineering students began a feasibility study of hydrogen-powered vehicles. Engine performance characteristics were studied and found to be suitable. The economics were analyzed and found to be favorable. Safe use of the fuel is easily achieved. The only technological obstacle at this point is the refinement of a compact, convenient, and safe fuel storage system of metal hydrides. This system is being worked on by several groups at UCLA and around the world, and should be perfected within a year or two.

This is no way to help our country get out of the crisis we are in. If they were working around the clock, we could have cut the time down. This UCLA choice of fuel, hydrogen, the lean fuel-air ratio accounts for low nitric oxide emission from hydrogen-fueled engine. The emissions are coincidentally reduced even further by massive exhaust gas recirculation, a technique employed to permit the use of moderate-to-high overlap camshafts. All carbon products are theoretically impossible, except from combustion of lubricating oil that might leak into the combustion chamber. Emissions figures from a test at the California State Air Resources Board show that the car easily meets 1976 Federal exhaust emissions standards.

Power from a hydrogen-fueled engine is comparable to a gasoline engine. It has the performance advantage of needing no emissions-control devices. This helps startability and driveability. We are short of fuel, not engines. This will clean up the smog in our air.

It is vital to stop talking about using oil. We might as well say, "Let's use our resources; we can burn wood."

No one would say burn the redwood trees. When I hear the talk as I have heard, how soon will we get to this? Will it be later? We talk about the fragile land. We should not talk about using oil as fuel at all. I don't know how much more time I have.

Senator TUNNEY. I am going to have to cut you off. I am sorry. We do have one other witness that wanted to testify. We would be delighted to have a full statement from you. I am sympathetic to what you are saying. I think you raise some very interesting points.

I might tell you that we did announce these hearings three weeks ago publicly. I also might point out to you a bill passed the Senate—I happen to know it was my bill—it passed a year ago—to spend $320 million at the Federal level to develop alternatives to the internal combustion engine. It has been tied up in the House of Representatives for a year. That is why it hasn't gone through. I agree there are inadequate amounts of money spent for research and development in this area. There is a need for Congress to awaken to the problem. Some of us have been doing something and we are aware of hydrogen proposals you are talking about.

Mr. CORA. Jet Propulsion Laboratory has proposed we burn hydrogen with gasoline, therein doing away with converter or catalytic devices. There is a mixture of gasoline and hydrogen. There are a great deal more things I have here. I protest the fact we have to rush

through these things. You have to leave. I know it is necessary but you should, in all good conscience, call another meeting and deal with alternative sources of energy.

Senator TUNNEY. Our next witness is Sue Nelson, who is speaking for Friends of Santa Monica Mountains.

STATEMENT OF SUE NELSON, FRIENDS OF SANTA MONICA MOUNTAINS

Ms. NELSON. I will be brief. I wanted to speak briefly today because it seems to us that the whole content of this hearing places the national urban parks and seashore in context and what we have been discussing in that in context. What we are proposing in Washington establishes clean water and air and public recreation resources in the very area mapped and identified today for oil drilling.

We are, therefore, offering with this legislation, hopefully, an alternative to land use and water resource use in the Los Angeles basin. It seems to us when one set the public alternative side by side with the kind of proposal put forward by the same Department, the Department of Interior, when we ask the actual cost to the public of oil drilling in the bay in terms of loss of water, air resources, and public recreation, I think the balance would add up that the cost of the national park to be less than the cost of oil drilling.

Senator TUNNEY. The other thing pointed out by an earlier witness, apparently there is a study that has been done that the taking of oil from the Outer Continental Shelf could increase the likelihood of earthquakes by 500 percent.

Ms. NELSON. The whole thing adds up. I don't know whether we are going to partial oil drilling, but the other land use alternatives have to be considered. I agree with you on the coastal zone commission plan. It seems this kind of national planning would augment the coastal program, the coastal plan. It is an important entity.

Senator TUNNEY. Thank you. I appreciate your statement. This brings us to the end of the hearing. I am sorry that the committee doesn't have an additional amount of time to listen to concerned citizens. I think the statements made today by Californians who are deeply concerned about the proposal to lease our Outer Continental Shelf lands were good ones, and I am hoping that the witnesses will amplify their statements for the record, because I think they are important. I would also like to urge anyone who is here today who did not testify, but feels they would like to submit a statement, to please do so.

This hearing record, as I indicated earlier yesterday, is not a record which is going to be put into mothballs and not be looked at by anybody. It is a record which we hope to utilize in the Congress as a means of developing a more rational policy for the development of our Outer Continental Shelf lands, and as I have repeated many, many times during the course of these hearings, I hope it will also be a data base we can use to prevent the leasing of these Outer Continental Shelf lands until the time that the California Coastal Commission has had an opportunity to develop its coastal management plan, have it accepted by the legislature, and then approved by the Secretary of Commerce. That management plan will then become the basis for deci-

sionmaking with respect to the development of the Outer Continental Shelf.

I will have an opportunity next week after I have had a chance to review the testimony with the staff, to recommend some more specific proposals to the Senate as it might apply to specific legislation or resolution, but I do want to have a chance before making such recommendation to review, intensively, the record that has been developed today.

I want to make sure that any proposals that we make are based upon a solid factual foundation. But already I can assure the people here that are still listening to the hearings that some ideas are already germinating in my mind and I think that we ought to be able to establish some initiative soon, in order to avoid what I consider to be a precipitous action on the part of the Interior Department to go ahead with full-scale exploitation of these oil resources in the Outer Continental Shelf off the coast of southern California.

Thank you very much. The hearing is adjourned.

[Whereupon, at 3:47 p.m., the hearing was adjourned.]

[The following information was subsequently received for the record:]

CITY OF PALOS VERDES ESTATES.
Palos Verdes Estates, Calif., September 26, 1974.

Senator ERNEST F. HOLLINGS,
Senate Commerce Committee,
Washington, D.C.

DEAR SENATOR HOLLINGS: On September 10, 1974, the Palos Verdes Estates City Council adopted the enclosed Resolution, entitled:

"A Resolution of the City Council of the City of Palos Verdes Estates, California, opposing the procedures of the United States Department of the Interior leading to the leasing of tracts for oil and gas development off the coast of Southern California."

The City Council requests that you give the City's position in this matter favorable consideration.

Sincerely yours,

ROBERT VOLLMER,
City Manager.

Attachment.

RESOLUTION NO. 796—A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PALOS VERDES ESTATES, CALIFORNIA, OPPOSING THE PROCEDURES OF THE UNITED STATES DEPARTMENT OF THE INTERIOR LEADING TO THE LEASING OF TRACTS FOR OIL AND GAS DEVELOPMENT OFF THE COAST OF SOUTHERN CALIFORNIA

Whereas, the United States Department of the Interior has announced a proposal to lease areas on the Outer Continental Shelf in Southern California adjacent to state tide lands for oil and gas development; and

Whereas, the State of California has limited oil drilling from most of the offshore and beach areas adjacent to lands now being considered by the Department of the Interior for development in the federal waters beyond the state's three mile tidelands boundary; and

Whereas, the 1972 California Coastal Zone Conservation Act provides for the preparation of long-range plans for the orderly conservation and development of the California coastline, and any move by the Department of the Interior to increase oil development along the coast before the state long-range plans are adopted could seriously compromise state, regional and local planning efforts; and

Whereas, the Federal Administration's stated position that states and local communities should be primarily responsible for land use planning is inconsistent with the Department of the Interior's proposal to proceed without a long-range coastal zone plan and coordinated planning effort; and

Whereas, oil development off the coast of Southern California could have a devastating effect on the coastal environment, especially the beaches and harbors, as the Santa Barbara oil blowout demonstrated five years ago; and

Whereas, oil is a finite, irreplaceable resource, and as such this diminishing resource should be reserved to the maximum degree possible for future use pending completion of a national energy policy which could include development of alternate sources of energy and comprehensive conservation programs which will relieve pressure on scarce oil supplies; and

Whereas, the projected time-frame of the Department of the Interior for awarding leases is inadequate to prepare, evaluate, and coordinate the studies necessary for an informed decision; and

Whereas, additional serious questions remain unanswered and must be addressed before leases are awarded, now, therefore, be it

Resolved by the City Council of the City of Palos Verdes Estates, that the announced plans to lease federal lands to provide new oil drilling in the Outer Continental Shelf off the coast of Southern California be strongly opposed at this time. Be it further

Resolved, as follows:

1. Award of leases for offshore oil and gas development in Southern California should not proceed until a comprehensive national, as well as regional, energy policy has been promulgated.

2. The Department of the Interior should timely submit its proposed oil development program to the California Coastal Zone Conservation Commission and other appropriate state, regional and local agencies for their review before any new leases are issued.

3. No leases shall be awarded until Congress has enacted new legislation strengthening existing laws relating to drilling and development on the Outer Continental Shelf.

Passed, approved and adopted this 10th day of September, 1974.

JOSEPH T. BARNETT,
Mayor, City of Palos Verdes Estates, Calif.

ATTEST:

BETTY STOFFERS,
City Clerk, City of Palos Verdes Estates, Calif.

STATE OF CALIFORNIA,
County of Los Angeles,
City of Palos Verdes Estates, ss.

I, Betty Stoffers, City Clerk of the City of Palos Verdes Estates, California, do hereby certify that the foregoing Resolution No. 796 was adopted by the City Council of the City of Palos Verdes Estates, California, at a regular meeting thereof, held on the 10th day of September, 1974, and that the same was adopted by the following vote:

Ayes: Councilmen Peppard, Prince, Welbourn, Beaton and Mayor Barnett.

Noes: None.

Absent: None.

Witness my hand and the official seal of said City this 16th day September, 1974.

[SEAL]

BETTY STOFFERS,
City Clerk, Palos Verdes Estates, Calif.

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